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This publication reports the content and proceedings of a conference at which curriculum planners and designers and academic specialists and generalists met with representatives of eight disadvantaged American minority groups to examine the relationships between curriculum change and better education for disadvantaged children. The body of the report contains (1) statements of the purpose and questions of the conference, (2) summary of ideas from all the group discussions pinpointing areas of consensus and of controversy, (3) suggestions for the future including recommendations and lists of key problems and priorities, and (4) addresses by A. Harry Passow, Keith R. Kelson, and R. Louis Bright. Appendix 1 consists of eight background papers prepared by population representatives regarding some considerations in dealing with the Southern urban Negro child, the American Indian child, the Southern rural Negro child, the Mexican-American child, the central urban Negro child, the migrant child, the Northern urban Negro child, and the Appalachian child. Appendix 2 contains short descriptions of nineteen curriculum projects which were represented at the conference. Appendix 3 lists the names and positions of the 76 conference participants. (JS)

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THE NDEA NATIONAL INSTITUTE CONFERENCE

NEW CURRICULAR MATERIALS AND THE TEACHING OF THE DISADVANTAGED

The Sheraton Park Hotel
Washington, D. C.
June 19, 20, 21, 1967

Project Report
prepared by

Virginia Frank
Southern Education Foundation
Washington, D. C.

JULY, 1968

The NDEA National Institute for Advanced Study in Teaching Disadvantaged Youth is supported by the United States Office of Education, administered by the American Association of Colleges for Teacher Education in conjunction with Ball State University, Muncie, Indiana.

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FOREWORD

In one of its first published pieces, the National Steering Committee of the NDEA National Institute for Advanced Study in Teaching Disadvantaged Youth declared that a "major interest of the National Institute is with the development of concern for and sensitivity toward the disadvantaged segment of our population on the part of those persons who have continuing responsibilities in the preparation of teachers."

No more forthright approach to such a challenge could be attempted than the Institute's Conference on New Curricular Materials and the Teaching of the Disadvantaged. It was the aim of the Conference to bring curriculum planners, academic specialists, academic generalists, and curriculum designers literally under one roof (in fact, into the same room) with representatives of eight disadvantaged minority groups in America for three days of discussion, controversy, and plans for programs of action. Since the Conference was planned for effective interaction, everyone contributed, and everyone learned.

An account of its proximate result is here presented. Its long-range results cannot be predicted, but a clue to such achievement may be measured in the growing awareness and creative reaction in national curriculum studies, programs, and materials for the educational needs of the disadvantaged student in America.

Special thanks for the success of the Conference is due to Dr. Martin W. Schein and Miss Freddi Berg, Director and Staff Assistant, respectively, of the Commission on Undergraduate Education in Biological Sciences, who directed the planning and coordinated the activities of the Conference, and to Dr. Saul Cohen who sparked the idea and served as special representative to the Conference Planning Committee from the National Institute Steering Committee. Mrs. Virginia Frank provided substantial leadership in the development of the Conference, particularly through her formulation of the ideas upon which the Conference program was based. She also took responsibility for preparing this report. The work of editing and producing the finished document has been ably handled by Miss Mary Wolfe.

RICHARD E. LAWRENCE
Director, NDEA National Institute for
Advanced Study in Teaching Disadvantaged Youth

Associate Executive Secretary
American Association of Colleges for
Teacher Education

July, 1968

AGENDA OF THE CONFERENCE

MONDAY, JUNE 19

Registration

Between seventy and eighty educators and representatives of the disadvantaged attended. Among their numbers were members of the National Committee of the Institute, officials of the National Science Foundation, the United States Office of Education, professors of education, professors of the academic disciplines, designers, planners, writers, and specialists of the major national curriculum study groups, representatives of the disadvantaged, and of the major education foundations in America.

Plenary Session

7 **Purpose of the Conference** Saul Cohen

Dr. Cohen is Dean of the Graduate School, and Chairman of the Department of Geography, Clark University, Worcester, Massachusetts. A member of the National Institute's Steering Committee, Dr. Cohen served as Committee coordinator for this Conference.

Strategy Martin W. Schein

Dr. Schein is the Director, Commission on Undergraduate Education in the Biological Sciences, based in Washington, D. C. He served as chairman of the Conference Planning Committee.

Practical Problems Gerald Weinstein

Dr. Weinstein is Director of the Elementary School Teaching Project, The Ford Foundation, New York.

Workshops

These eight groups each included a moderator (most of whom were National Institute Committee members) a curriculum specialist, an academic generalist, an academic specialist, a program designer, and a representative of a particular disadvantaged group. Four different curricular organizational principles (to be described in the Project Report) were assigned among the eight groups. Such principles were part of preparatory material with which all participants were provided.

23 **Dinner Address** A. Harry Passow

Dr. Passow is Professor of Education, and Chairman, Committee on Urban Education at Teachers College, Columbia University. Dr. Passow was Director of the Special Study of Washington, D. C. Public Schools, 1966-1967.

TUESDAY, JUNE 20

Workshops

Each of the eight groups continued to interact, preparing for the plenary session in the afternoon.

Plenary Session

This was a mid-way point in the Conference, to allow for presentation of interim group reports, and to provide exchange of inter-group views.

Session for Special Interests

Academic specialists and curriculum designers in particular disciplines met for a special session in each of several academic areas.

WEDNESDAY, JUNE 21

Plenary Session

Working drafts of final reports for each groups, as well as comments and reports from the special interest groups were presented for group reaction.

Luncheon Addresses

27 **Keith R. Kelson**
Dr. Kelson is Deputy Associate Director, the National Science Foundation, Washington, D. C.

31 **R. Louis Bright**
Dr. Bright is Associate Commissioner of Research, United States Office of Education, Washington, D. C.

General Session

Where Do We Go From Here?

Reports of the generalists, moderators, and population representatives evoked a general discussion from all participants regarding future plans. Key ideas and priorities for such future plans are contained in the report of the Futures Committee.

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I.

THE PURPOSE AND QUESTIONS OF THE CONFERENCE

The National Institute for Advanced Study in Teaching Disadvantaged Youth convened a three-day conference in June, 1967, to examine the relation between curriculum change and better education for disadvantaged children.

A group of some sixty individuals came together in Washington for the purposes which Dr. Saul Cohen, Dean of the Graduate School and Professor of Geography, Clark University, outlined as follows:

My role in launching this workshop is to comment briefly on "Why We Are Here." I'd like to cast this within the context of the changing demands of American society upon the curricular component of its educational system. I think that we can subdivide these into two demand periods: first, the one for scientific modernity; and second, the one for social relevance.

It was the space age competition that pressed us to initiate a wave of curricular innovations in the scientific spirit that has diffused from the physical, mathematical, and life sciences to the social sciences and the humanities. In essence, the demand for scientific modernity has had as its objective, the transfer of sophisticated research tools and notions to the classroom. And despite all of the problems encountered, I think that this has been a relatively successful adventure for American education.

But the demand for scientific modernity, which has had scarcely one decade within which to evolve and which is only now beginning to make its impact upon many of the social sciences and the humanities, is being pressed by the new demand period—that for social relevance. Many of us who have been concerned with curricular reform are being challenged by a new host of pressures, far more complex than those which simply call for translating techniques of scientific analysis in the traditional disciplinary and inter-disciplinary context. We are being challenged because our concern has been to find a "handle" for transmitting knowledge—both concept and content—whose relevance is questioned by so many of our classroom students and teachers, and by academic colleagues, too.

The most searching questioners come from the ranks of those who profess themselves to be experts on the disadvantaged. In effect, however, the questions they raise are pertinent to the broad spectrum of American education; for regardless of race, color, creed, social class, or income, the American youth does have piercing criticisms of our traditional values, including the educational ones. As a matter of fact, I feel that the real issue of relevance lies in what we are trying to teach the mainstream, not in what we are trying to teach the disadvantaged.

The convenor of this workshop is the NDEA National Institute for Advanced Study in Teaching Disadvantaged Youth, a cumbersome title to describe a body of educators who are concerned primarily with the disadvantaged, but more broadly with American education in general. The Steering Committee consists of eleven distinguished educators, ten of the educational psychology, philosophy, and administrative variety, and one traditional discipline-oriented individual—myself. Despite diversity of background and interest, this Steering Committee is concerned with the central role that curriculum must continue to play in whatsoever change the educational process will undergo in its search for social relevance and new values. And, therefore, we have assembled this group.

By "we," I refer not only to the National Institute, but to Martin Schein of the Commission on Undergraduate Education in Biological Sciences whose organization is a product of the demand period of scientific modernity, but who, like so many of us who have been caught up in school curriculum innovation, now find ourselves labeled as "traditionalists" by those who say that we are locking the barn door while the horse has fled.

This workshop comprises curriculum-makers from a number of nationally based curriculum projects in the sciences, social sciences and humanities; this, in turn, includes some curriculum-makers who are already deeply involved in the search for social relevance through the form of their materials, and some curriculum makers who are too busy trying to grapple with the applicability of their materials to the ninety-ninth percentile group to worry about broad relevance. It includes educators who are specifically concerned with **how** and **in what context** the disadvantaged are taught, and are split amongst themselves on the question of **what should be taught;** and finally, it includes those who are on the classroom firing-line.

It is the kind of a group whose numbers can learn a good deal from one another. It is a group which, if it wills, can become the nucleus for a major thrust in refashioning classroom content to meet the needs of our times. We have one minimal goal: to hear one another out. We have a more ambitious goal: to interest some uninvolved curriculum projects in developing materials that will be relevant to the teaching of the disadvantaged. But we have an even more ambitious goal: to help spark a long-term interchange on curriculum and social relevance.

Most of the projects represented here have been supported by the National Science Foundation, the United States Office of Education, and a few private foundations. The interest of the NSF and OE in helping us to organize this workshop encourages us in the belief that our long-term goals are neither inappropriate nor illusory.

Additional direction was given to the conference through background material sent to all the participants. The material included this statement of purpose:

A. Introduction

Within the past decade a major thrust in American education has been the concern with curriculum reform, with new materials, and with modernizing the structure and content of individual fields and groups of fields. A large number of projects, both national and local in scope, embrace the natural sciences, social sciences, and the humanities. Most of these projects are geared to the needs of the college-bound youth who resides in middle-class suburbia.

The NDEA National Institute for Advanced Study in Teaching Disadvantaged Youth feels that there is inadequate attention directed to the problem of curriculum as it relates to the poor and, in turn, to the values and objectives of the majority.

We are therefore issuing an invitation to a number of national curriculum makers—some possessing insight into and experience with the problem; some who have not yet directed their attention to it—to participate in a national workshop dealing with the issue of new materials and the teaching of the disadvantaged. This workshop is conceived as the initial step in a process that will, it is hoped, see the attention of many major curriculum makers turned to one of the major educational issues of our time.

There are thousands of children in this country for whom the schools represent a foreign world, another culture. For some of those children the school is part of the enemy, an institution which, like the police force, seeks to control and exploit them. For many others it is simply a futile exercise, leading to no tangible improvement in their situation, and unconnected to the real concerns of daily life.

Some of these children begin school with enthusiasm, if only because it promises escape from an uncomfortable and unhappy home, or perhaps, because the value of education may have been conveyed to them, and a natural sense of adventure and curiosity can operate. But it is not long before most of these children become discouraged, since poor children do not measure up to the grade level achievement standards set by more affluent school populations, and poor minority children remain even further behind. Thus, as children grow older the school becomes less and less meaningful.

The children of the middle-class know that industry and at least average intelligence in a school setting provide the only real access to the occupations and comforts of their parents; they recognize that they must pass through the same process to achieve the same results. But the poor and segregated children soon clearly see that the same aspirations are not expected of them. They learn the hierarchy of school values that says they do not need and cannot achieve a mastery of all the material offered therein. And, since few of the roles in which they expect to spend their lives seem connected to the school curriculum in any case, they accept that judgment. The weight of determinism settles over them. As they learn that they do not much matter in the wider education setting, they react to the low expectations either with passive acquiescence, or with active rejection and hostility.

The schools cannot be expected to reach all of these children with sensitive repair of the whole damage done to them. But within the school context it is not too much to expect that children should learn to understand themselves and their world more accurately, and that they should gain a realistic set of expectations and exposures. The classic American definition of education is, after all, that it leads away from poverty, isolation, and discrimination. Only over the last decade have we seriously considered how schools might tackle this problem; reshaping our ideas about how to serve these children will take many more years.

There are many areas in which this examination is now being carried forward with great hope. One of the most important is in teacher training. Moreover, changing the homogeneous character of school populations promises to increase the ability of disadvantaged children to gain confidence and knowledge. Another arena of new discovery is related to learning theory, a better understanding of why children do and do not learn certain things. Finally, the organization of the schools themselves is beginning to get attention and criticism.

Among all these, however, is another field that requires attention: the instructional content, or curriculum of the schools. We have not yet learned how to arrange and apply the subject matter of the schoolroom so that it will have relevance to the life concerns of the children of poverty. We are now learning to cast the material so that children can discover knowledge for themselves and thus make it an effective part of their mental equipment, but we have not yet solved the prior problem of how to make that material have meaning to their own problems and concerns.

B. Alternative ways to organize curriculum

The temptation is to consider the disadvantaged child as an unexposed and empty vessel, whose environment has not provided him with the experience he needs in order to take advantage of academic education. In actual fact, however, he is full of concerns, experiences, values, questions. The fact that some of them are negative and self-defeating rather than responsive to the idea of learning means that we must do more than get him ready to learn; we must organize the curriculum so that it answers his questions. If we hope to transmit to a child certain values and views we must deal simultaneously with his own values and views.

If we think of education as a process of getting into more education (college) or of getting a job, we cannot arrange it in a way which is relevant to a child who is sure that college and good jobs are not in his scheme of things. If we are anxious to produce children who have a realistic estimate of who they are, why they matter, what is important and possible in life, then we must organize the earliest years of school to deal with those matters.

We are not seeking to help them adjust, nor are we precluding the pursuit of knowledge for its own sake and for pleasure. The debate is not bland exposure versus intellectual rigor; rather, the task is to undergird investigation of the disciplines with a structure related to the human concerns of these children.

This task requires more than a peripheral effort to "motivate" children back into the structure which has demonstrably failed them, by telling them that to play the game and survive will pay off. We should instead take more seriously the lesson of the original rejection, for it tells us that we have been designing instruction to meet the needs of children who already have certain assumptions and perceptions, who seek certain goals, and are prepared to face certain pressures. If we intend to provide education for all children, we need to accept alternative estimates of needs and goals without putting a lower value on them. This means reorganizing academic instruction into meaningful patterns which will relate to the lives of the children.

Along with the lack of verbal skills that characterizes many disadvantaged children, comes a kind of attitudinal starvation. Their diet is deficient in those perceptions of reality about themselves and about the world that can make motivation to learn and achieve possible, that can stimulate them to acquire those skills which are universally helpful, that can enable them to choose a working set of positive values.

A national group need not make any judgment about relative merit among these values to see quite clearly that there are some which are severely lacking among disadvantaged children, values whose absence makes impossible an appreciation of academic instruction. Our failure to transmit some of these values, or perceptions of the world, at an early age means that the pursuit of academic knowledge becomes increasingly irrelevant. Schools now organize curriculum around acquisition of basic skills first, and later around academic disciplines as ends in themselves. Not only do schools tend to ignore the inaccurate or distorted perceptions that children often bring to school, schools frequently intensify and promote these inaccuracies.

If disadvantaged children are to be taught how to learn and make use of knowledge, the curriculum itself needs to be reorganized, at the elementary level in particular, so that it combats the myths which surround poor and segregated children, and so that it gives them the tools with which they can organize knowledge for themselves.

C. A national curriculum workshop

Some units around which curriculum might be organized have been selected for the purposes of a national workshop. They are not meant to be definitive, and the purpose of the workshop will not be to argue their merits for this or other purposes. Rather, they have been selected with some care as examples of the kind of organizing principles which would speak directly and overtly to the needs of poor and segregated children, and would at the same time be sufficiently universal so as not to single out one population group or another for special or artificial constructs. They have also been selected as examples of units which could include a variety of material selected from all the disciplines, as it might be coordinated into meaningful ideas for young children.

It is the belief of the convenors of the workshop that many teachers and administrators in disadvantaged schools are searching for such tools, and would welcome an opportunity to test and explore such new curricular ideas. Moreover, there are now available new funds, both public and private, for curriculum development. Systematic evaluation of the instructional content of schools in depressed areas is underway in many places.

This national workshop proposes to examine a relatively new approach to curricular organization, to discuss it intensively over a period of a few days, and to reach conclusions about its value for further development. The workshop will bring together many individuals who have thought about this problem extensively, some of whom have already been engaged in efforts to write relevant curriculum units for the disadvantaged.

D. Suggested organizing concepts

1. Creation and Manipulation. Man differs from the animals in that he can create material and spiritual things, and can control his natural environment.

Rationale: This is a fairly obvious attempt to get at the negative feeling that "nothing I do matters," to create a sense of control of environment, to erase the feeling of immutable forces and a world of "givens." Things do change; our country is in fact built on the conviction that man can shape his world to his own needs. Creation of something new can be simply arranging things in new ways; things can be arranged for the purpose of beauty, for communication, for comfort, for protection, for pleasure, etc. The sense of manipulating the environment for specific purposes is a simple but necessary idea for young children.

Sample Content: Endless kinds of "making" things. Some of the best early language work seems to be built around making a story out of given words or ideas—manipulating things.

Ecology, geography, urban studies, and the like, furnish many examples of controlling environment, or the deliberate setting aside of area which man decides that nature should control. The idea of "control by default," e.g., smog, could be included. Control groups in social studies could contribute to the idea.

Case studies are informative; e.g., Israel's re-establishment of the chain of nature in a desert.

2. Relativism. There is more than one valid way of seeing everything, and of responding.

Rationale: Here is an overall need to get rid of the "right answer" syndrome, an attempt to make an instinctive relativism part of every child's equipment. For every problem there is more than one solution, usually raising more problems. The specific application to disadvantaged children will be a perception that there is more than one way to accomplish a goal, that their values and options are not "wrong" as opposed to somebody else's "right." Cultural relativism is a more positive notion than assimilation. The study of polarizations should lead to a realization that life is not either-or, but a series of connected options to make relative changes (not nihilism versus capitulation to Mr. Charlie; not following exactly our father's way versus rejecting it entirely). Tolerance for relativism, for ambiguity, and for uncertainty depends on a secure self-image and self-confidence.

Sample Content: Optical illusions, perspective in drawing, sensory illusions (Are we moving or standing still?), contribute to the idea, as does the use of words in different contexts to illustrate their different meanings. Discussions of polarizations, e.g., war versus negotiation; discussions of customs or phenomena that are satisfying in some cultures, repellent in others, are useful. Art and music furnish many examples of relative beauty.

3. Causation. Everything has a cause; past experience governs present action. Some of these causes are man-made, some natural.

Rationale: Here again the concept of control is vital; children are taught to distinguish between what they can influence and what they cannot. Consideration can be given to their natural questions about how much of themselves is subject to manipulation, how much given; about their increasing realization that just as what others do and say affects them, so what they do and say affects others. The disadvantaged child needs to know that there is no magic order of things which governs his affairs; life situations have causes which can be understood and influenced by individuals. He can thus deal with the idea that although his options may be more limited, there are always areas open to influence by personal action.

Sample Content: Obvious areas of examples are genetics, with its emphases on immutability, hybridizing; literature, with illustrations of inevitable consequences, as in Greek tragedy; anatomical study, such as the reflexes and involuntary processes; chain reactions in physics, chemistry. Mathematics is also illustrative, particularly with demonstrations which show how changing one factor in an equation changes the results. The social studies games illustrate human and natural causation.

4. Expectations. What we expect of ourselves and of others is based on learning and experience, and is not always accurate.

Rationale: Like the concept of relativism, the concept of expectations will help children to be more skeptical and discriminating about things around them. They can learn to have more realistic expectations about themselves, to take rational chances, to develop internal expectations that may differ from the norm. As they understand that their expectations about things and about people are governed by external appearances and past experiences—and are sometimes deceptive or inaccurate—they will discover that the way they see themselves is also influenced by the expectations of others.

Sample Content: Laws of predictability, mathematical laws of probability, a study of evidence as concept, with illustrations, provide many examples of expectations. Everyday objects which look familiar but do not fulfill expectations: a collapsible chair, a carrot which tastes like peppermint; people who act in certain ways only when in certain roles—a child's father who is a policeman, or judge—all these illustrate the cultural basis of expectations.

At the opening session, Mr. Gerald Weinstein of the Ford Foundation put before the conference a series of tentative statements and questions to give shape to the discussions and to set their limits as broadly as possible:

- A curricular objective might well be to separate from the "required" body of knowledge that which is being superseded daily or that which is easily acquired at time of need.
- We might consider the academic disciplines in a new light: as a tool for solving properly diagnosed learning problems. What have we available in the curriculum to help a child grapple with his own life?
- We might consider obstacles to a multidiscipline approach because compartmentalizing by subjects gets in the way of learning, especially for disadvantaged children.
- A single discipline approach impedes a consideration of values; in turn, this will inevitably intrude upon learning.
- Which engagement with contemporary issues has the most payoff for children, directly or indirectly? What can the structure of each discipline contribute to the analysis of issues?
- Can one help the teacher to change by re-defining the task of the teacher and the curriculum that is used? Must a teacher be personally involved in the creation of the curriculum in order to use it creatively?
- How do materials get into schools? What does this consideration dictate for the creation of materials?
- When we talk about changing curriculum, are we really talking about the subject matter, or the people who put it together in school curriculum?

II.

SUMMARY OF THE PROCEEDINGS

For the next two days participants divided and redivided into small groups, meeting midway to hear each other's reports and further probe the issues, and meeting finally to hear encouragement and further questions from officials of the United States Office of Education and the National Science Foundation.

The conference scarcely aimed to settle the very profound questions with which it dealt, or to establish guidelines for the use of curriculum developers throughout the country. It was, rather, once again to underline nationally the serious problems which schools must face in their failure to educate large groups of children. To put it another way: the intent was to take a reading on the agreements and the disagreements which exist among a group of those who bear a heavy responsibility for helping the schools and the country to solve such problems.

The summary which follows, and which is cast more in terms of questions than answers, brings together ideas from all the group discussions to illuminate, in the accurate phrase of one participant, "areas of consensus and areas of search."

A. Who are the disadvantaged? What generalizations are possible? What sub-cultures can be identified?

In order to begin the discussion, and keep it on the track, an individual who was representative of a distinct disadvantaged population met with each working group to present a brief background paper and to participate in the talks.

On these questions, none of the working groups came to any real consensus. Defining the "disadvantaged" child remains a value laden and controversial enterprise, subject to continual revision and exception.

Some groups held to the line of the child's deficiencies and handicaps:

"Certain characteristics of the group can be regarded as disabilities or inadequacies which limit or block learning and progress in school. [There are] weaknesses in ego-structure or personality that cause them to be labeled as disadvantaged . . . Learning experiences should build a more wholesome personality . . ."

Others took an opposing position:

"We often think that the disadvantaged have special problems, and indeed they do; but the major problem is one caused by the refusal of the disadvantaged to endure the meaningless and poorly handled educational process frequently found in the schools. The school problem is the same for the non-disadvantaged, but their culture persuades them that they must persist or the rewards which are held out to them will not be achieved."

Some participants called for more precise information:

"The population experts themselves are just generalizing from their own experiences. There are too many value judgments being made."

"Give us the psychological and social variables and we can produce the curriculum."

And many rejected the notion of significant difference entirely:

"There appears to be too much concern with the personality and emotional weaknesses of the youngster, and not enough concern with educational problems that we suppose all these youngsters have . . . it appears that all teachers would worry about for the first years of elementary school is one intensive course in psychoanalysis."

"We are talking about the urban Negro population of Washington but it is just a question of the urban situation. I would say we should minimize the differences, and say that good education is the answer in all cases."

Still, a feeling persisted among many participants that important distinctive characteristics were operating, whether derived from the culture or from the exclusion of a group from social acceptance and economic gain. For instance:

"We see strong reason to deal with the hostility and with the disregard for outside authority of the ghetto child. He has a high regard for peer group authority, and a high action orientation."

"There are typical characteristics of such children, and of their home life; such as lack of adult models, harsh punishment, less supervision and more peer approval, lack of respect for, or ambivalance about, authority."

"We should use to advantage the early maturity, the attitude of responsibility for peers, and the ability to tackle difficult situations, of the inner-city child."

"The Mexican-American child has a largely different family structure; a strong community cultural identity and strong interest therein; distinctive orientations to time and nature concepts. There is little relation between the school culture and the child's already learned values."

"Appalachian white children are not discriminated against, but they have very little power. The stream of the world has passed them by, and few people really look at them. Their manners are so good that they don't protest; they don't demand change."

But the most impressive differences related to the American Indian culture, based as it is on the heritage of a hunting people who are basically at variance with *a peasant-derived culture. Because they have chosen to withdraw rather than to compete, their isolation has increased. Almost all of the discussion of education for Indian children was quickly established on the premise that there were indeed significant differences, and that almost nothing in standard educational content and method was sufficient.*

Thus in trying to come to grips with this broad question of significant cultural, ethnic, or social difference, in trying to define which characteristics matter for educational purposes, the widest disagreements of the conference and the greatest frustration about lack of knowledge came to pass. The only possible conclusions seem to be:

1. The variety of "disadvantage" in terms of cultural or economic deviation from the middle-class American norms is too great to permit generalization; moreover, the variety of social and economic norms within the same cultural sub-group *often precludes generalization.*

2. Some cultures, i.e., the American Indian, are so radically different from the norm that national and even local school personnel are quite inadequate to deal with the situation.

3. Some children, not necessarily culturally different, inherit such a quantity of barriers to economic and social acceptance that the simple quantitative difference becomes a qualitative one, producing rejection, hostility, or indifference with which the schools must learn to deal through curriculum as well as with every other means at their disposal.

4. Some culturally different people are commonly considered disadvantaged because they do not function well within schools based on different values. This raises questions of whether the schools should continue to try to pull all children into the mainstream, or should learn to educate for diversity. At this point came the murkiest discussions, for adherence to cultural difference sometimes results in perpetuation of economic disadvantage.

Thus the troublesome question of: Disadvantaged in relation to whom? led inevitably into disagreement over the purpose of education.

B. What is the purpose of education?

Sooner or later every working session had to deal with the primary and perennial question of "education for what?" Although the definitions determined much of the course of any other discussion, rarely were they definitions that should apply exclusively to disadvantaged children:

"to provide students with a wide range of occupational choice, competence to perform a citizen role in a complex democratic society, knowledge and interest for cultural growth, interpersonal and intrapersonal competence;"

"to open up the possibility of choices to the disadvantaged—life choices—in the kind of society we are emerging into;"

"to make the schools an instrumentality to opportunity, to give children the right to select and discriminate;"

"to enable the kid to achieve, to choose to melt into society."

One of the basic differences emerged on the question of acculturation. Some participants felt this was an unquestionable aim:

"the subjects taught in school should become vehicles for acculturation;"

"if our goal is not to pull them into the mainstream, can any of our normal curriculum help them?"

"I have doubts about our culture, but I bet if I took poor kids and transplanted them to a middle-class environment that in twenty years they would be better off than if they had stayed where they were. They could realize their potential."

"The purposes of the curriculum for the disadvantaged are (a) to prepare them to enter the mainstream of American society; (b) to gain control over personality deficiencies which hamper effective learning and effective operation in acceptable social circles; and (c) to develop skills, knowledge, information and modes of operation which enable them to become effective, contributing members of society."

Others took exception to this formulation:

"Schools viewed as something that turns them into white men and violates their cultural values are resisted as a threat."

"Many groups of citizens don't want to be acculturated."

"We must reach the child himself to find out what is important and real for him, what he considers the good life, so he can capitalize on his inherent cultural characteristics. Becoming Anglicized shouldn't be synonymous with succeeding."

But without the traditional middle-class skills and earning power, what is the value of cultural difference?

"They wouldn't lose their culture, tradition, and background. I have been in slum homes; they face problems of a magnitude that has no relation to middle-class homes. This is not a problem of culture."

"You can't get anywhere unless you have the skills of verbalization."

And yet, the conflict of their world with the standard atmosphere of schools seemed to some so strong that it precluded the possibility of learning:

"I worry that you want these kids to hate their environment. It is often inside them as well as outside, so to hate their environment would be to hate themselves. . . ."

"I'd teach them that what they hate is the filth."

"No, what they hate is their complete lack of power. They have absolutely no control over where they live or what they will do. They view the world either in paranoia or as a mystery."

Other complex definitions emerged, dealing with the world of non-power, the possibility of cultural strength which must not be lost, and the acquisition of working options:

"A child needs an understanding of how he got to be in the situation he is in, that it is not his fault."

"Education is a process through which the child learns to look at the world; it gives him concepts significant in helping him build an organized view of life."

"Schools should give kids a chance to build analytical strength to combat the outside world, should give them tools to deal with emotional issues. A refuge built apart from realities of the world to help them gradually face the world, a haven."

"School should be not only a sanctuary, but a place from which to learn involvement with the community."

"The child needs to learn to be competent enough in the academic area so that he can negotiate with the middle-class world."

"People in the slums feel they are inconsequential. All kids need to feel that what they do counts."

"Education must provide the hope that comes with competency and success."

"Education must value the child; he will then value himself and others."

"We should teach children that they can cope with their problems, both academic and social. If a child can seek answers and solve problems by himself, then he begins to feel that he can manipulate his environment. He begins to feel that his environment is not a magical phenomenon but rather something he can learn about and adjust to."

"We need to educate so that people have enough general information to communicate their needs. Poor people can't describe their symptoms to a doctor because they don't have enough knowledge of their own anatomy or language to communicate their problems."

But some considered an overemphasis on personal fulfillment to be a dangerous regression into unacceptable standards of academic competence:

"To educate for satisfaction is anti-intellectual."

"If you concentrate on what exists, if you use curriculum to verify real life, you are eliminating possibility of academic expansion."

"Are we developing curriculum on the basis of needs, or satisfactions? That is just a curriculum of therapy."

"Maybe you do violence to the internal structure of a discipline if you don't teach its own organizing concepts, but seek some organizing concepts from the social need."

Others questioned how much social change should be dependent on the schools:

"Should the school be some kind of agency of social revolution, revolutionizing society?"

"Intellectual stimulation should stand on its own. Schools don't need to make their whole rationale on the basis of changing the lives of disadvantaged children."

Thus, as the issue was clarified, it evolved chiefly around the definition of education as a means to provide people with the tools to choose achievement and comfort on their own terms, but not necessarily at the price of adopting the culture and values and life style that are traditionally associated with wealth and comfort in America.

Much of the discussion then centered on the difficulty of truly functioning in society while still maintaining some significant cultural differences. With the world of employment's increasingly stringent demands for both basic and refined skills in communications and in technology, it is everywhere difficult to reserve the central portion of education for the liberation of the mind; and all the more so when the additional burden of overcoming hostility, rejection, and despair is likewise placed on the school.

Simultaneous goals of traditional academic excellence, of therapeutic learning to manipulate an unsatisfactory environment, of pleasure and fulfillment—these sometimes seem more than any curriculum can achieve. And doubts remain that a society which views education as the vehicle for passing on traditional values and for blending differences, can reshape its aims to foster variations of values and cultural relativity, especially through the same educational vehicle.

C. Should there be a deliberate effort to create one or more kinds of non-standard curriculum for disadvantaged children?

Although the participants came to some agreement on the special educational needs of opportunity-deprived children, and on how such children's status might be defined, few of the participants felt comfortable with the idea that there should be a special curriculum design which would set apart such children, thus reinforcing their "difference."

Some felt that this would only be a new concession to the demonstrated failure of "tracking." This suspicion was reinforced by other participants:

"What does the conference expect us to do from here? For instance, Biological Sciences Curriculum Study (BSCS) already has 'slow learning' materials; are they looking for something else?"

Some felt strongly that the demonstrated ability of disadvantaged children to handle abstract concepts and advanced subject matter at a very early age required only that they be taught with high standards and high *expectations, giving children opportunity for success in fields where they clearly can excel. This view was advocated most strongly by Dr. William Johntz, who has used with remarkable success highly abstract mathematical concepts and intellectual imagery without benefit of analogies or material drawn from the environment of his very young students.*

A few participants held that it was not the curriculum which needed to change, but the atmosphere of the schools and the closed nature of the system:

"As long as schools are places of negative thinking and discipline, nothing else makes any difference."

"The current procedures that all legislate against the kids, *that's* what needs changing.

"Examine the structure of knowledge needed in a learning system, and the type of people who can put this across. Let the learning be where it can best occur: in the factory, or the community, or even the pool hall. The system of teaching a little of this and a little of that is silly. Look to the major problems of society: man and water, man and transportation, man and communication, etc. Structure *that* way; involve people from various segments of the population."

"We are looking for a wider range of age groups involved in teaching and learning, for more use of different sites, for more use of different pastimes as learning, for more flexibility of roles among those supposed to be teaching and learning."

"The school ought to think of itself as responsible for more than the diploma—or no diploma. It should teach kids how to get where they want to go; into jobs, or into college."

Many felt that since the possibilities of moving the whole system to a different basis were unrealistic, curriculum change might perhaps be a place to make a start on the problem, thus helping the teachers who might not otherwise be effective, to acquire new tools:

"It's the program, not the organization that will bring change; if we can get one that meets the needs of the kids, the system will adjust to it. I have put a program in at Berkeley that is a science program but which the school claims as a language program. The kids have made their own reader regarding what they are doing in science. They have objects in hand, things to talk about. The success has caused the principal to look for a whole new approach—to use the tail to wag the dog."

"I believe that if all potential teachers realized that creativity would be demanded and rewarded, you would have creativity. If teacher training and selection were as it should be, there would be relatively little need for curriculum reform. Since, however, all is not well with the teachers we have, curriculum reform remains significant."

In addition, there was strong feeling in some quarters that while the need to select socially relevant subject matter was perhaps more pronounced among disadvantaged children, the same need rumbles through all education today:

"Poor kids aren't the only ones crying for relevant materials."

"All kids need to learn how to survive and be human and be themselves in this complicated and crowded world. We all need to do some better looking at values, and how to solve social problems."

"This same conflict is hidden in the regular conformity of all classrooms; it is just more apparent in a subcultural classroom."

"The disadvantaged are once again serving as a handle to raise questions about the entire system."

The insecurity of migrants, the communication problems of those for whom standard English is a second language, the hostility of ghetto children—all these extreme needs of children reveal that without direct confrontation of the problems within the entire school, including *curriculum, there will be no chance of success:*

"The schools try to wipe out hostility by ignoring it or punishing it; they must learn to use it, to capitalize on it, for learning."

"Unless you give them some practice in how to break out of bad situations, some intellectual equipment to learn how to manipulate their lives, most of them will never make it."

"If they bottle up their rejection, their anger, their fear, their despair, it defeats them. School should get it out, teach them how to deal with it."

In spite of some cautionary advice:

"The whole thing can get too ludicrous if we try to use only Negro language. Brooklyn College doesn't start with Yiddish. You have to guard against those extremes."

Eventually a feeling grew among some participants that more is required than adaptation of existing materials to other languages, more than avoidance of materials that may offend certain customs:

"The disadvantaged urban Negro has basically the same needs as all other individuals. We believe that the essential factors for building curriculum are to be found in the processes of the disciplines and in certain broad concepts that grow out of these disciplines. We are agreed further that the school must go beyond simply presenting the concepts and the processes to the point where we help children see the application of such relevant concepts and processes to the immediate personal and social problems which these children do and will face."

"The content of public education is too uniform, hence not directly related to the differing backgrounds of children who are not Anglos."

"The principles of science may be the same, but to make them have meaning for kids they have to be rewritten by and for the subculture which intends to use them."

Thus, defining curriculum as more than the content of individual subject matter, seeing it as the interaction of teachers and students and content over a period of time, many participants could agree that there is a need to design special curriculum for special situations. Curriculum can and should give children the intellectual tools to make choices, to revise their own place in society if they wish, to increase pride in their own uniqueness, to provide some means of emotional detachment, and to achieve the skill to manipulate their future.

D. What would be the characteristics of such a curriculum?

The attempt to define such a curriculum illuminated many more of the participants' assumptions. Obviously the problems of purpose intervened, for until there was more clarity about the goals, there could be little consensus about the curriculum itself. However, a few of the working groups reached a sufficiently minimal agreement on purpose to wrestle thoughtfully with a definition of what new curricular materials might look like.

Some primary agreement on the large terms was not difficult; few opposed, in principle, the need for behavioral goals, the desirability of individualized instructional materials, or the value of the discovery or inquiry method for children who need reassurance about their personal value and competence.

But the familiar argument between advocates of basic skills and their challengers raged:

"There are too many subjects already in elementary grades. Everything should be geared to reading, writing, and speaking."

"We are slaves to the idea that fundamentals will carry one through."

"I don't question the need to learn to read and write, I only question your way of teaching it."

Such controversy actually raised the central question of the conference: What is a "relevant" curriculum?

Relevance *turned out to be one of the most difficult words of nearly every group:*

"That word is the baby of compensatory education. We should examine it carefully if we are going to make it such a key word. Are we talking about individual or social relevance?"

"You can't use the word relevance without a connective . . . and environment is such a connective."

"Relevance has an intrapersonal meaning. It describes a relationship between a kid's experience and the teacher's goals for him."

"There is a tendency in the social sciences to use the experience of children as the basis for developing an instructional program. There is no need to reproduce these experiences; why should we teach a kid to live like his environment?"

"Relevance has to do with process, not goals. Does the process fit the child's environment?"

"You should wait until they have learned how before they are encouraged to ask why. If they ask why too quickly the adult, the teacher, will have to supply all the answers, and then you run the risk of bias. If the question is held off, then the children will add the input."

"Relevance simply means that we have to get away from teacher-directed activity . . . the child should learn to perform because the content has meaning for him."

"Maybe kids are turned off by being asked to talk about objects or situations they have never seen. If they are allowed to talk about what they know about, maybe they will be turned on."

"Bring in a bunch of objects that none of the kids have seen . . . then the disadvantaged ones won't be behind."

"Abstract reasoning is an almost universal desire of children. . . . Therefore, it's relevant."

And closely related to the puzzle of "relevance" was the discussion of "abstract and concrete."

"Is it really sound to say you should start with the concrete and move to the abstract?"

"The teacher has to organize a direct experience with materials, begin there to learn facts about materials and process, and then generalize."

"It is more than a question of examining the evidence. Methodology should begin a youngster with tangible things—after all, he learns through the senses—and help him grow into conceptual learning. Naked experience progresses into cognitive conceptions."

"Extreme theoretical verbalism is not good with nonverbal children."

"But it's not the acquiring of facts, it's the understanding of relationships that is important, especially for these kids."

"The learner should begin with manipulation of environmental objects and continue learning until the ability for abstract manipulation of evidence is developed. The abstractions developed should have the most powerful predictives of physical and human events. Organizing concepts from science allow predictability to change the physical environment. The organizing concepts from social sciences should give direction to the technological developments for human existence."

Some participants put other determinants ahead of concreteness or familiarity of materials, however, and held strongly to the ability of young children to deal with abstract and unknown constructs. They put forth some other notions of indispensable components of a proper curriculum, for example, the direct involvement of children in their own learning:

"The contract system is exceedingly useful for disadvantaged kids. It teaches them by experience that they do indeed have options and that their own choices will be honored."

"Students teaching students is terribly important, for the children need to become active agents in the whole process of education, not just passive recipients."

"The only way to get the kids on the side of learning is to put them in charge."

Closely related to that thought is the value of open-ended discovery-based curriculum:

"The curriculum and the teacher should help children decide what they really want, what it really feels like to make one's own decisions. Repetitive methods and conventional classroom conformity are to be rejected. Question-asking, problem-solving methods are essential. The discovery method facilitates such concepts as those suggested for discussion at this conference."

Still another important definition was the search for "culture-free" curriculum:

"Disadvantaged children are more likely to succeed initially with subjects that are not too culture-laden. Abstract mathematics, science, and foreign languages are relatively more culture-free than others."

A few asked for curriculum which teaches children how to change society, a curriculum which frees him to be a change agent rather than one which binds him to a predetermined discipline:

"They can learn to transfer manipulation of the physical environment (technology) to manipulation of the social environment."

Some cautioned against too much in the way of subject matter:

"We must not confuse diversity of program with quality, which cannot be achieved through the proliferation of subjects."

A constant theme was the need for curriculum which provides visible pay-off and success:

"The thing that matters is success and continued success, both at concrete or abstract things."

"A curriculum is needed that provides experiences in which the child can confirm his own success, so that he does not depend on the teacher, or on his own environment to verify the importance of what he is learning."

In regard to the notion of interdisciplinary organizing concepts (as was suggested in the background material for the conference), most of the groups accepted its usefulness in principle but paid relatively little attention to it specifically:

"We also agreed that the learning activities and experiences that constitute the curriculum for any group should make prominent the development concepts such as the suggested 'organizing concepts.' However, we see these concepts as being central ideas in any good curriculum . . ."

And yet interesting notions developed simultaneously in several groups around the nature of "evidence," itself typical of an organizing principle. This concept seemed to focus various different ideas:

"They need to have a clear hold on reality, to get an idea of what actually exists, what there is evidence to prove, if they are to get functional."

"These kids have a problem of manipulating their environment. They need to see what happens when ingredients in the environment are changed; they need evidence of social phenomena as well as scientific phenomena."

One group grew deeply engaged with an idea of "necessary and sufficient conditions" as an organizing concept for curriculum.

Its deliberations are quoted at length:

"Since we were uncertain whether we could find any concepts which could cut across several disciplines, we decided to take one of the concepts we had mentioned and put it to the test. Could the mathematical concept of 'necessary and sufficient conditions' be applied in physics, social sciences, and poetry? Would this broad concept serve in a variety of subjects?"

"We define 'necessary and sufficient conditions' as those conditions required to make things happen. We posed the following question: How do you know when certain conditions must exist in order for an event to take place? How do you know when you have all the conditions needed for that thing to take place? We set them against these certain propositions: For example, 'I am going to be at school at 9:00 a.m.' It is a necessary condition for being at school at 9:00 a.m. that I wake up. However, this is not a sufficient condition. Sufficient conditions for being at school at 9:00 a.m. are that I wake up, get up, get dressed, and walk to school. Whether all of these are necessary and sufficient, is open to question. If we confuse what is necessary with what is sufficient, we are in trouble. I could do the necessary things like getting up and dressed, but this would not be sufficient if I forgot to walk to school.

"We found that the concept of necessity and sufficiency could be applied readily to art and literature. What are the necessary and sufficient conditions for a piece of writing to be defined as a poem? It doesn't, for example, have to rhyme, but it must have a certain amount of structure. Otherwise it is a prose paragraph, not a poem.

"In social studies, the concept can be applied to the propositions, 'What are the necessary and sufficient conditions for a person to feel worthwhile?' 'What are the necessary and sufficient conditions to effect change?' 'Is it necessary for a man to have short hair and a woman to have long hair to be considered manly, or feminine?' Once a child has found these conditions, which are both necessary and sufficient, he can use them in dealing with many phases of his environment.

"A child might ask 'What are three necessary conditions to make it with your gang?' The answer might be that (1) he must never squeal; (2) he must be able to defend himself both physically and verbally; and (3) he must dress 'sharp'. But the child could ask, 'Are they sufficient?' and be told 'No, you gotta have long hair, and you got a crew cut.'

"This concept's relevance to the disadvantaged Negro are manifold. If he asks the question, he often learns that no matter how many necessary conditions he achieves, they are not sufficient for him to become a member of the gang. One can take him further. He asks, 'If I do this, will I be part of the mainstream?' No. Here, action and social protest come into play. The ramifications are endless in politics, economics, and the behavioral sciences.

"With concepts such as 'necessary and sufficient conditions' and 'continuum' and the 'processes of comparison and contrast,' we can help the students to gain a more accurate perception of themselves and the world in which they live."

E. What would each of the disciplines have to contribute to such a curriculum?

Most participants agreed in principle that interdisciplinary coordination of curriculum is useful:

"Curriculum is by definition the interdisciplinary organization of concepts and principles."

"We must free ourselves from the restraints of named disciplines."

In the particular, however, some familiar and some not-so-familiar points arose about the need to keep subject matter content discrete. For example, the internal requirements of a discipline may dictate a structure to which a problem-oriented curriculum does violence. Through many of the working groups, however, there was a continuing discussion of the relative merits of various disciplines in meeting the needs of disadvantaged youth. This intensified when the conference was regrouped and given a chance to meet by "discipline."

A number of participants believed strongly that science is particularly suitable for providing deprived children with a chance to achieve:

"There are few 'disadvantaged' children in science; the children do adopt it and adapt to it readily, yet science usually gets the shortest shrift in elementary school."

"Some of the new science curriculum is freeing the children from Dick and Jane. Children watch the development of chicken embryos and write only on what they observe. Likewise, they can use ITA, and make the transfer rapidly."

"The math and science people are teaching something new to the children, something which is not in conflict with what they already know; while the social science and language arts people are often teaching in direct conflict with a system, a set of attitudes, which is already established."

"Science can be a useful launching pad to get a child engaged in questions about the nature of the universe, how can he deal with it, manipulate his own universe. This will have immediate repercussions in the social environment."

"If evidence about reality is an important concept for these kids, science is based on the premise of evidence."

"The advantages of abstract math are that it is acultural, relevant, and has high status."

Some cautions were expressed, however, about overemphasis on science:

"I worry that the scientific approach would limit rather than enlarge a child's experience. 'Do this and that will occur' places too much emphasis on rationality."

"When you believe, as in science, that all is neat and clear, you will get smashed in the real world. Why not note that there are unpredictable things that get in the way of solutions?"

"If you teach kids that there is such a thing as abstract truth, like color has nothing to do with biological equality, they won't believe you. They know it's a myth."

"I am bothered by the scientific approach, because it implies that you can control the variables. What predictability is there in a ghetto kid's home life?"

In a number of groups a case was made for the use of subject disciplines other than reading to teach children to read (perhaps because there were almost no reading specialists at the conference!):

"The ideas we used in mathematics were useful vocabulary builders. They wanted to learn to use those words."

"You can say that children need to read in order to do other subjects, but the other subjects can be made part of the reading lesson."

"The child has to be able to discuss everything. Discussing his own situation is not only relevant but it can give him practice in communication."

"Language is an abstraction from reality; science is a step toward communicating what really occurs. Observation can lead to speaking and writing."

"When kids get involved in solving puzzles or working out a game they have more motivation to learn to read than just the repetition of 'you need to learn to read to get a job'."

From the few specialists in art at the conference, came a strong plea for the use of visual arts for deprived children, especially for those whose cultural heritage will give them a positive base if properly valued:

"Children need to see themselves as people with a background. They can reach the real identity through art. Art is by definition the expression of self. You can't get communication until one learns to develop the personal thing, the self as a person."

"Indian children cannot exist out of the framework of their traditions. Their own pride in their heritage can be developed in terms of their artistic culture. They need to know that their people were great architects, sculptors, musicians. When you see a child emerge as a person, you have him hooked, and the things he at first rejected begin to have meaning."

"The real value of art is to be different, for that is where the praise and reward lie. For kids who want to be comfortable in a difference from the norm, that is a way to practice."

"Art is a personal, one-to-one relationship; it is unique in this."

"Refining the child's ability in visual perception through art teaches him visual literacy; this can benefit him in all the other subjects."

At still another level, many participants emphasized the need for direct confrontation with disadvantaged through the social sciences curriculum:

"No matter how much else you do with the general curriculum, Negro kids need to know about this history of exploitation, or they will never be able to cope with their own situation."

"If we don't help kids identify their own subtle expectations about race and about cultural differences, society will continue to exclude those who have a different background."

"There is no need to avoid values in social sciences. Kids know the difference, and social science needs to openly discuss value problems."

"We need a curriculum which is directed to the redress of grievances."

"But you have to guard against minimizing concepts and processes, or you just end up with a unit on 'the Negro'."

"A real attempt to correct the problems caused by inappropriate educational procedures calls for commitment and courage on the part of those in education. One could tinker with methodology or with the superficial aspects of curriculum, notably the non-controversial aspects, but this will not produce effective change. The program in social studies, for example, should deal with the children's real concerns about war, employment, justice, sex, and other areas of life. Social studies, along with other subject areas, can serve as the vehicle for learning the necessary communication or quantitative skills if the children perceive the areas as dealing with their problems."

And, finally, after some heated competition by the scientists for primacy in solving new curricular problems, some synthesizing began to take place:

"We have fallen into a polarization of social sciences and humanities on the one hand, and science and math on the other. Now can we walk out of ourselves and look at this? I have some relationship with science and math, but I also have some pretty strong feelings that scientists and mathematicians could very well continue in their laboratories in Nazi Germany. It was the philosophers and poets who had to be put in jail. So I want something from the poets and philosophers and social scientists; I know they have something to bring. We all have special competencies to bring, but let's get out of the position of haggling with each other. Let's not throw away what we already have started; it seems to work. Let's look above the problems of disciplines."

"Let's not emphasize the two culture bit; science is not about to take over the schools. But in the schools, which are now social-science oriented, the social science they teach would not be acceptable nor even recognizable to social scientists. Let's get to work."

"Technology is science-based, but it involves intuition and experience. In the social sciences is the business of human interaction. The impact of technology on environment is important here. We need to build bridges among disciplines."

F. Who should produce curricular materials? How can they be developed and adopted?

A few of the groups spent many hours of debate on the role of national or publicly supported curriculum development groups, while some participants insisted that curriculum which had not been developed locally would not be used locally.

One of the working group statements deals centrally with this issue:

"Teacher attitudes about . . . children and communities from which they come is the context in which curricula is used. Teachers of disadvantaged children must have adequate understanding and appropriate attitudes to be able to establish real rapport. . . . This is a necessary condition for achieving a positive outcome regardless of curriculum. Some members of the group were almost willing to maintain that this constitutes a sufficient condition for the proper education of disadvantaged children. However, to some degree we all finally endorsed the position that even with a teacher who has all the proper attitudes and understandings . . . such a teacher needs the help of a prepared curriculum. . . . Obviously this curriculum must be open-ended, adaptable, and flexible. The more experienced the teacher, the less he will use it. But this help is particularly needed by teachers who have not come from backgrounds like those of the group they are teaching."

Most of those present concurred in the need for special materials, to be developed and made available regionally or nationally (perhaps because a majority of the participants represented such curriculum development groups). A few held out for the role of teachers:

"They must be more than cogs in a wheel."

"If they had practice in curriculum development as teacher trainees, they could learn to do it."

But more felt that there was an even greater problem of adoption.

"It won't do any good to get new programs, as long as the system has its current restraints. If we are going to have innovative materials, they must be tried outside the present system."

"The present schools legislate against the most effective learning."

"What school administration is actively interested in teaching the truth? Social studies is built on a series of myth."

"Local control may be a virtue, but is also coercive and oppressive. If you free people for self-expression, for political power—people who haven't had it—you are going to have to arrange for real options for political fulfillment. That's not so easy."

But the strongest protest against national curriculum development within the disciplines came from the working group concerned with American Indians. This group came to an understanding that the only real solution to the Indian rejection of the American school system was to turn over the development of a school system to the Indians themselves. (The entire group report on American Indians is included at Appendix One, Number Two.) *Such an experiment is now, tentatively, under way at Rough Rock, run by Indians, many of whom are illiterate. It is growing and developing with the advantages of available resources but without outside control. It is the first time there has been a real freedom of selection, a principle which must be expanded and supported. There was profound skepticism in this group, however, about public funding for the necessary development in this area, because of the small number of Indians.*

In fact, the Conference evinced considerable skepticism about federal funds for curriculum development, as well as about the willingness of the public to allow for trial and error, to provide effective freedom to experiment with quite radical educational ideas, and to provide test situations within the public system. Between the shortage of funds, the rigidity of administration, and the insistence of parents on familiar models of success, the hopes for truly experimental curriculum development were less than enthusiastic.

Some advocated an experimental competitive school system that would not depend on existing school administrations for its arena. Some advocated the expansion of a work/study combination that would provide students with two different experiences. Still others held out for gradual reform on the NSF model, quietly working within the system, with extensive in-service teacher and administrator training. In every case, the expense of development was underlined.

However, the need for curricular materials that emphasize more individual structuring of learning activity; that deal effectively with implicit value problems, hostilities, and rejections; that lead the inadequate teacher toward more creative attitudes and techniques—in short, that meet the criteria discussed at the Conference—this task seemed so complicated and so urgent that the role of national curriculum organizations could not be dismissed.

Thus some participants examined ways to improve these organizations by increasing their sensitivities toward educationally-deprived groups; by moving them away from notions of "slow learners" into intellectual confrontation with deeper social issues.

"It was suggested that members of these organizations should spend a year teaching in the field. It was suggested that some teachers of disadvantaged children join the staff, but it was maintained vigorously that, with few exceptions, the teachers now to be found in the schools serving these populations were incapable of providing the curriculum organizations with much useful information. It was suggested that more diverse kinds of individuals be included than is usual: civil rights workers, poverty program personnel."

G. How can curriculum function in the whole school setting?

Participants were instructed to talk only about curriculum matters, not about the other components of the school situation. This, of course, proved impossible. The elements that this particular gathering of people found it impossible to ignore may be worth noting:

The whole posture of the teacher and the training which she receives, need to be restructured to make possible a classroom where children are valued and the techniques of inquiry and individual difference are fostered. Many of the curriculum development participants had considerable experience in working out new curricular materials in school settings, and had realized widening circles of adoption for their materials. They spoke with feeling of the difficulties of getting teachers to look with favor on radically different approaches to teaching. Fewer participants had had close involvement with the negative attitudes of many teachers toward poor and minority group children, but those who had such experience tended to feel that confidence in a child's ability to learn must be stressed in testing new materials.

"A major problem in effecting curriculum change is the conservatism of the education establishment. Attention must be given to the causes of poor achievement for the disadvantaged and what is needed to prevent its continuance, even if a different concept of education is demanded: a concept of education that integrates learning and requires teachers to plan together with recognition of children's characteristics."

More material should be written into curriculum which would help the teacher to involve parents and community members in the classroom and in the learning process. The closed classroom often tends to work against connections between subject content and life.

Deeper connections would help not only the teacher's ability to understand her task, but would help to reduce the barrier of value difference between home and school. Since teachers are often reluctant to share their task with nonprofessionals, they need curricular endorsement of the involvement of teacher aides, parents, community resources, students-as-teachers, and so on.

"The failure to recognize that education takes place within the child's entire environment through his life span, has resulted in a school program isolated from the community and confined to the formal educational efforts of the teachers. There is a need on the part of the educators to go into the community as students and participators in the genuine concerns of the population. There is a need for educators to bring the community into the educational process by having resource people in the community sharing in the responsibility of teaching and of working with children as volunteers and auxiliary personnel."

The number of adults in the classroom, and the use of nonprofessionals for teaching purposes should increase.

"The teacher-pupil ratio is an important issue, deserving of much further thought and experimentation; but individualized attention, by whatever means, is needed beyond a doubt. This workshop group recommends the systematic examination of all forms of tutoring, using the term *tutor* in the classic rather than the remedial sense. Experience in the group suggests strongly the use of peers, older students, parents and other adults closely identified with the child's own immediate life experience, as tutors. It will often be important to pay the tutors. The benefit to the tutor must not be overlooked, as the process may also raise the tutor's self-esteem and promote his intellectual growth."

The importance of beginning the school experience at an earlier age must be realized by all.

"Attention to the problems of the disadvantaged must start long before the child reaches first grade. Some researchers have indicated that the roots of learning disability are to be found in the pattern of communication that takes place as the child learns his language. Early attention—at the ages of three, four and five—to the child's quality of experiences and communication is needed. A consistent program of learning that takes place after the child enters what is now considered the elementary school must be followed if early learning progress is not to be lost."

If more self-directed and self-valuing experiences for students are advocated, then there should be a strong case for training teachers in this way. Teachers who are faced with the challenge of cross-cultural or threatening situations, as in the inner city, tend to fall back on the familiar style in which they themselves learned, rather than upon more experimental styles in order to solve new problems. An experience in self-reliance for the teacher (independent study units, videotape analysis, self-directed experiments) will give her more confidence in the ability of children who may seem not to share her values.

"If the teacher is to utilize modern instructional technology, then such technology must have been a part of her preparation, and not an illustration purporting to be part of the world outside of college. She must develop a commitment to the profession of education and to the importance of her position to those children with whom she will work. If she is to teach her students to have a commitment to discovery, then she must be their model, and this should be expected of her as part of the requirement for teaching."

Just as the possibility of teachers' inventing their own curricular materials should be stressed, so also the need for teachers to be extensively schooled in their own and related disciplines should be stressed. Thus their flexible choice of examples, units, materials, and experiments would come from an intellectually inventive and accurate store of information of their own.

The whole educational system could be restructured to involve more adults with children, and more children as teachers, breaking down age definitions of student and teacher, involving adult learners with child learners. The curriculum which might be appropriate to such mixed groups would look quite different from "third grade science" or "ninth grade civics."

For some disadvantaged groups, the very problems of physical comfort and school continuity are basic. Ideas of mobile schools, payments for parents to persuade them to support a child's education, and other fundamental questions discussed at length, came before concentration on curriculum.

The conflict between home values and even the best values which might be reflected in a social institution such as the school ought to be a constant matter of concern. Where an "organizing concept" or value judgment might be unfamiliar to parents or unacceptable to them, a great need to involve parents in the school was expressed.

III.

SUGGESTIONS FOR THE FUTURE

As the meeting ended, some tried to take stock of what had happened. Expectations had been generally high, and generally remained unsatisfied.

On the one hand, the curriculum specialists tended to feel that they had not received enough data: "You say our materials aren't relevant, but you don't give us guidelines for improving them." The range of experience within this group was very wide; some confronting these problems for the first time, some already deeply involved with schools and children of poverty in projects that excited, confused, and tantalized them.

On the other hand, those representing the disadvantaged populations commented that they had hoped for more sensitization of the curriculum specialists, more immediate effort to bring their skills to bear on complex human needs.

And almost all present felt that the reporting was inadequate, that the discussions were at once more subtle, less prone to neat summary, less conclusive, than could be put on paper. (They will doubtless react in the same way to this final summary.)

On the whole it was a reasonably new mixture of people concerned with education—"molecules in a container bumping against each other in new ways," according to one. A beginning was made toward confrontation, toward challenging assumptions and strategies.

One of the working groups became a cohesive and exciting exchange of ideas and experience, whose members will continue to seek the conceptual basis which would make effective curriculum development possible for urban ghetto children. They were concerned not only with the relevance of materials to the lives and hostilities of the children, but with the ways in which teaching methodology might be incorporated into the curriculum itself, overcoming the resistance of both teachers and children to dynamic engagement.

Other groups felt ready to tackle projects in different areas, such as problems of Mexican-American children of the Southwest, or of migrants. But beyond these groups within the curriculum conference, many participants felt ready to engage their own curriculum projects with problems of ghettos, of migrants, of culturally separate groups of children. Because of a very real understanding that "disadvantage" is not a single entity, a number of the curriculum specialists expressed a willingness to deal with a specific locale, or a specific problem, to plunge themselves more deeply into a given situation. But they insisted that this kind of undertaking would require firm assurance of continued funding, for they did not want to start down roads on which they might later be stranded.

Appendix

Report of the Futures Committee

Members of the Committee: Saul B. Cohen (Chairman), Vernon Haubrich, Martin W. Schein, Harold E. Tannenbaum, Herbert D. Thier, James H. Werntz, Charles A. Whitmer

I. Key Problems and Priorities (as noted from the working group reports):

1. No specific **curriculum** (used in its broadest sense: as a linear strategy for instruction) should be developed for the disadvantaged; what is best for the disadvantaged child is likely to be equally applicable to the advantaged child.

2. Within the system of curriculum innovation relevance and a "tune-in" mechanism are needed. Curriculum innovation refers to content, and even more, to instructional strategy.

3. The issue of personality and behavioral characteristics of the disadvantaged is central to how the "tune-in" mechanism is developed.

4. The development of skills—reading, writing, speaking, mathematical skills, and the like—remains central to the problem of bringing the child into the mainstream of society.

5. As considerations in curriculum design, the issues of education need (skill development) and populational characteristics (personality and behavior) are not mutually exclusive.

6. Relevance must be viewed within the context of scale, and of situation. Relevance to the local situation and relevance to the national situation represent a polarization of cultural subgroup and mainstream values.

7. How far can teachers and students go in creating their own curriculum? They must have relevant resources and materials which they cannot produce themselves, generally, but must seek from the curriculum-making community. For this reason as broad a set of options as possible in curriculum development must be provided.

8. In the search for flexibility and one-to-one relationships, there is a danger that the benefits of group dynamics and group interaction will be lost. This has considerable relevance to curriculum "packaging."

9. The Indian's educational problem is unique. Ways must be found to help the American Indian community to develop its own educational structure within the framework of its own cultural needs and objectives.

II. Future Steps—Recommendations to the National Committee

1. **Task Force.** We would like to explore the development of one or more task forces of curriculum project

directors, each of which would turn to one area, working within a thoroughly integrated framework (school, state board of education, university), to try to develop the comprehensive use and adaptation of new materials to the teaching of the disadvantaged.

2. **Small Group Conference System.** We are prepared to encourage small group meetings (as structured at this Conference) over the next six months, i.e., a small conference system. The purpose is to develop more cross-disciplinary "rub-off," such as the use of science and social science programs as tools to develop language skills, or "tuning-in" curriculum projects to the personality and other behavioral characteristics of the disadvantaged.

3. **Support for On-going Curriculum Projects.** A major issue is to galvanize large-scale financial support for those curriculum projects which want to tackle the issue of using their materials in teaching the disadvantaged. The conference itself, the published proceedings, and the conference interactions among individuals and groups are expected to be instrumental in developing a more favorable climate of fiscal support. Concern is expressed for the bringing of USOE regional laboratories into the proposed linkups between national curriculum projects and the educational scene.

4. **Planning Committee.** To manage the implementation of the above steps, and to consider the desirability of initiating a long-range workshop mechanism based upon the results of these steps, the establishment of an *ad hoc* Planning Committee is recommended to the National Institute.

IV.

Based on a Talk by

DR. A. HARRY PASSOW

Professor of Education and Chairman,
Committee on Urban Education
Teachers College, Columbia University
Director, Special Study of
Washington, D.C. Public Schools 1966-67

Few people talked about the "disadvantaged" even five years ago when the First Annual Work Conference on Curriculum and Teaching in Depressed Areas was held at Teachers College in 1962. Frank Riessman's *The Culturally Deprived Child*—one of the first such volumes—had just been released that spring. There was greater concern with juvenile delinquency than with the disadvantaged.

It is hard to realize that fewer than a half dozen years have passed since we began to mobilize our energies and our thinking toward achieving the long-voiced goal of providing equality of educational opportunity for all. (Incidentally, in the report on the District schools, we take the position that the only way to provide equality of educational opportunity is to provide unequal opportunity; the equal treatment of unequals provides neither equality nor justice.)

Recently, I have tried to analyze some of the mistakes that were made in the development of programs for the gifted that we seem to be repeating in the development of programs for the disadvantaged. When we were starting the Talented Youth Project in 1954, I sent a questionnaire to more than a hundred school systems that had been named specifically in a 1941 NEA publication as having "a program for the gifted." We asked what had happened to their programs in the thirteen intervening years. The replies were really something to read; in fact, they should have been published! For example, the first system (in alphabetical order) replied, "Yes, we had such a program for the gifted, but that was run by Mr. X who is now in Idaho. If you write to him there, he will be able to tell you about our program." I did write. Mr. X answered promptly, "Yes, I was responsible for the program and if you will write to that system they will tell you all about it." This went on for more exchange, until I dropped it. I would estimate that of more than 100 schools named, fewer than two dozen had programs still in operation a dozen years later.

The question that must be asked is *why?* My guess is that we simply have gone through the organization, and the form, without getting at the substance and the content of programs. We made some administrative modifications, but we did not come to grips with the basic question: If a youngster is talented, what kind of educational experiences ought we to provide for him? What content modifications? What material differences? What teaching strategies? What are the essentials of what a talented individual learns and how does he learn it? We did not come to grips with these basic questions in most of the programs that we initiated.

I think that were we to go back now and do another survey on programs for the gifted, we would find more institutionalization of programs because more attention has been given to the dimensions of aggregate curricula for these youngsters. We do have some institutionalization of provisions for the gifted. However, as we get into the crossfire between what we think we must do to overcome segregation or racial isolation, we have found ourselves abandoning programs for the gifted, for we feel we are unable to reconcile all these works. Had we been focusing on instructional programs and working on the basic problems of programs that really deal with individualization, we would not have to worry now about the form and content of organization.

One of the problems that we had when developing programs for the gifted, the talented, and the academically able is that we never did arrive at acceptable definitions. In the twelve years we worked with the gifted, we never arrived at a uniform definition of the populations we were planning for. Exactly the same thing has happened now with the term "disadvantaged." (A short time ago we published a book of readings with a wonderful Jules Feiffer cartoon as a frontispiece: an old man says, "I used to be *poor* but they decided that was bad for my self image so they called me *impoverished,* then *culturally deprived,* then *disadvantaged, etc., etc.*" Finally, he says, "I still don't have a dime, but I have a rich vocabulary."

Just as we never came to grips operationally with who are the gifted, now we are not really clear as to who are the disadvantaged. We try to apply labels, but fail to recognize that just as the gifted were not a uniform population, neither are the disadvantaged. For instance, although the District of Columbia pupil population is more than ninety per cent Negro, there is considerable diversity among the students, with a wide range of individual differences on all characteristics. The time has come to realize that there are differences among the disadvantaged just as there are in any other population. Not all minority group children are disadvantaged.

We ought not look for uniform definitions but for the kind of improved diagnostic procedures which will prevent our classifying a child as "disadvantaged" simply because he lives on the "wrong side of the tracks" or is a Negro, Puerto Rican, Spanish-American, or whatever. With better diagnostic techniques, we will screen pupils as they come into the educational program to determine what their developmental strengths and limitations are and what difficulties they may encounter. It is important for us to direct some of our efforts to refining the diagnostic procedures that will help build better programs to take these differences into account. Let me illustrate. In connection with the Washington Study, we screened 179 second-graders—all of the second-graders in three schools of different socio-economic status—on a variety of factors: vision, hearing, motor coordination, physical handicaps, balance, perception, and intelligence. We found that more than half of them had some kind of defect in vision, coordination, or hearing. All were in regular classes and all were labeled "disadvantaged." Had a better diagnostic job been done, it might have been found that their lack of scholastic attainment was caused by various defects. They may or may not have had experiential deficits, but they did have physical defects that had gone unnoticed and undiagnosed. To be "disadvantaged" may actually involve various deficits, experiential and physical, which are environmentally as well as genetically determined.

Reading disability is one of the major contributors to and consequences of disadvantage. Were we to diagnose the components of reading skills, we might then help a child with a reading disability with the specific help he requires rather than have him run through a complete but redundant remedial reading program. This is why a Skills Center for Reading makes so much sense; it enables us to diagnose the factors contributing to the reading disability and to provide the specific instructional techniques and materials designed to overcome that particular area of disability.

Many of the new programs for the disadvantaged are lacking evaluative studies. The assessments that have been made show, as Gordon put it, "ambiguous outcomes affecting unknown and amorphous educational and social variables." The consequence of the meager evaluation of most of the Title I ESEA programs (the one title which requires that evaluation procedures be built into the proposal) is that the most critical questions regarding our understanding of how to provide education for the disadvantaged not only remain unanswered, but for the most part, have not even been asked. While enthusiasm and good will continue to grow, we have yet to apply critical analysis, research findings, and practical experiences to increasing insights into the nature of appropriate compensatory education.

Even the Coleman report, with its mass of data, (which are read in almost the same way as the three blind men looking at the elephant, for everyone has his own interpretation of what Coleman really said), provides grist for the mill but few definitive conclusions which can be used by the educational planner for instructional purposes.

The United States Civil Rights Commission went even further than Coleman in its *Report on Racial Isolation* in the schools, flatly declaring that all compensatory education programs have failed. It declares that the only way to overcome the problems of the disadvantaged is to end racial isolation by federal legislation providing massive funds for buildings, bussing and so forth. I would heartily endorse all efforts to provide for desegregation *and* integration—two quite different processes. However, there are situations in which there will be racial imbalance; yet, in such situations, quality education must still be provided.

Despite the Civil Rights Commission report, I am not willing to write off compensatory programs so readily nor am I willing to minimize the need for developing quality educational programs. We have not yet asked the kinds of questions nor gathered the kinds of data which would enable us to judge the value—or lack thereof—of compensatory education. Consequently, we continue to do "more of the same, harder."

One estimate suggested that half of the Title I (ESEA) proposals, for example, deal with remedial reading, often using usual reading techniques, most of which have been tried for forty years. They did not work forty years ago and there is little reason to believe that they will work now. What aspect of reading ought we to be emphasizing that might be different for the disadvantaged? Perhaps whether it is "Dick, Jane and Sally" or ITA is really not important, but rather which "Dick, Jane and Sally" or which ITA for a particular learner under particular circumstances.

At a meeting of one hundred or so tutoring agencies in New York City—all volunteer groups that work with children after school Saturdays and summers—I was struck by the fact that totally untrained people (volunteers, high school kids, mothers, and what not) who come in for an hour or half an hour once a week, reported success in teaching the children to read. Teachers had been working at this all day long, five days a week, and had not been successful, but the untrained volunteers were able to teach reading. (The Passow Proposal is that we have volunteers work from 9 to 3 and then have teachers come in from 3 to 4, thus solving all our educational problems!)

But what is it the volunteers are doing? They do not have any better techniques; in fact, they are untrained. What they do have is something we ought to strive for, and that is a one-to-one relationship. When an adult or youth sits next to a child and points to a word, the child cannot daydream. He cannot be "tuning-out" because the tutor "tunes him back in." Perhaps this is a lead; perhaps what is needed are techniques and procedures for dealing with the "tune-out" phenomena, and for arriving at a one-to-one relationship.

It seems pertinent to study all the subject matter areas, asking the question: What has this discipline to contribute to the population labeled "disadvantaged? How should the disadvantaged be taught differently? Is (or how is) science different for the inner city child than it is for the suburban pupil? Is mathematics different? Are there social studies differences? Or, is it simply that there are no real differences except in the way we package them?

Sometime ago I attended a conference dealing with questions about mathematics for the disadvantaged. The mathematicians present decided that the reason children do not learn mathematics in slum schools is that the teachers, not having had enough mathematics, are afraid of mathematics. Therefore, the solution proposed was to so increase the requirements that all elementary teachers would have 12 to 15 hours more of mathematics. Then the question was raised: "You men all have sufficient hours of mathematics. You are not afraid of mathematics. Were you to walk into third grade in a Harlem school, would the kids learn any more mathematics?" The response was predictable: "We wouldn't dare walk in." The underlying assumption must be that "the stuff" is there, and it is only a question of "giving it out" to the children.

There may be some insights for social studies in the Citizenship Education Project, which has been found primarily in middle-class, white, suburban schools. The "laboratory practice" notion—using the community as a laboratory for learning—is quite applicable to the disadvantaged. In the program I have seen that begins to approach this idea, teachers are not teaching these children government as it exists in the textbook, and they are not teaching them that Henry Hudson sailed up the Hudson River. What they are saying is: "Here's our neighborhood. Let's take a look at these two apartment buildings, to find existing violations and to find out how we go about correcting them. Let's find out what the power structure is which will get this garbage cleaned up." I suspect that those kids are learning a lot more about social studies—civics, government, and politics—than are their more favored peers.

Are there not counterparts to this in each of the subject areas? Are there not some problems that focus attention on the "guts" of the particular subject and on the kinds of learning needed by the disadvantaged?

While there are many different kinds of instructional content, there are at least three that are appropriate to the disadvantaged: One type of instructional content is basically compensatory in the sense of correcting deficits which have been diagnosed and not simply presumed. If a child has visual discrimination problems or problems in concept formation, ego development, motivation, and the like, then we need to provide experiences specifically related to compensating for that particular deficit. These deficiencies can be diagnosed and procedures planned on a matching basis.

There is another important category of instructional content which is simply developmental, *i.e.,* it takes children where they are and moves them up from that point. Developmental reading, mathematics, and similar areas might be included in this category.

There is a third class of content that derives from today's urban world, with its vast, complex problems as well as its affluent resources. At one time, I worked in two contrasting situations: the lower East Side of Manhattan and Lewis County in upstate New York. Lewis County is very rural (possibly the only county in the state where the population has declined in the past twenty years). I was struck by the absolute quiet except for the wildlife noises, and the absence of visual stimulation except for the beautiful scenery. What a difference between that environment and that of Manhattan's lower East Side where one is simply crushed by sounds, sights, smells, and a confluence of human activity. It seems to me that there are potential learnings from this muddled cacaphony of sound and sight. There are interactions and interpersonal relationships here that the youngsters learn to cope with that we do not use in terms of our formal teaching and learning. This is the urban environment which we have not exploited for learning. The rural child does not have these same stimuli, these same learning resources; he is disadvantaged in other ways.

While we tend to be gun shy of anything that might remind us of "life adjustment," Edgar Dale has pointed out that the critical choices individuals make are not mathematical, linguistic, scientific, or historical. They are choices of values, of the use of time, of the use of energy, of the use of money; choices of friends, of mate, of receiving and expressing ideas. Edgar Dale suggests that we need a life management curriculum. The curriculum content must help all children, not just the disadvantaged, to learn to live effectively in a complex, changing society.

True, education for the disadvantaged has dimensions which are not quite so crucial for the privileged child in more favored homes; for the latter, resources accumulate, motivation and support are far more customary. What we need to do for the impoverished child is to break the "spiral of futility"; we must try to implant hope where hope does not exist. In these tasks, the school must find ways of succeeding where families and the neighborhood are not succeeding.

What I am arguing for is that we consider content as the basis or the focus of our planning efforts, worrying less about form and organization, and such things as whether we have a middle school or junior high school or even a graded or ungraded school. Too often, it seems to me, we argue whether a program is ungraded, when in fact, we really ought to ask ourselves what is going on within this ungraded situation. Let us find out what children are going to learn, what experiences they are going to have, how these should be organized, how these should be managed, and what the environment for learning is going to be. In terms of the particular needs of the city dweller, there is an environment we have not yet begun to touch.

We ought to talk about strategies and methods in an entirely different way: how to reach kids and have contact with kids; how to simulate a one-to-one relationship; how to individualize instruction, not in the sense of having a child work by himself but in terms of having him involved and committed to the particular experience or activity with which he is working at the time. (The nice thing about the Talking Typewriter is that the child is locked in there and there is nothing else for him to do except to pay attention to the simulated surroundings. It is an environment which surrounds him and therefore constitutes a "strategy.")

We need to look critically at the kind of instructional materials we use. Dr. Jean Grambs has written a paper titled, "Dick and Jane Go Slumming," in which she says (in effect) that having decided that we need Negroes in our textbooks, we color the characters sepia and then think we have a book that is multiracial and multicultural. I do not want to be too hard on publishers, but in too many instructional materials, we seem to have created a "Basal Reader Negro" who is the educational counterpart of the "Company Negro."

There is a whole series of issues concerned with content, materials, teaching strategies, evaluation, and assessment techniques. Tests used with disadvantaged are often inappropriate for such a population, and moreover, the reporting is often inept. (Sometime, the American public will learn what a median is. I find the public is appalled to find that 50% of the kids fall below the median!)

On what basis shall we judge change? We know that the disadvantaged children do not read so well nor do they do math very well—often, because they cannot read the problems in the text or the test. But what about the child's self-image, his sense of values, his commitment, motivations, aspirations? These are areas which are important in starting children along the educational road, and we do not even attempt to measure these growths. We design a program to affect the child's self-concepts or his attitudes, and then administer a reading test to see whether the program has been effective.

In New York the teachers' union and the Board of Education are quarreling over the staffing of the More Effective Schools program. The program now has four teachers for each three classes and a maximum of 22 pupils per class. There are six or eight additional specialists, and an additional expenditure of $500 per child in the MES schools. The Board of Education proposes to eliminate some of the health education and audio-visual coordinators. The union is fighting them. I am willing to grant that the More Effective School program works (despite the evaluation report issued by the Center for Urban Education). I would accept as fact that some children learn to read better. But do they learn to read better because of the health-education coordinator and the audio-visual aid coordinator? They may; but we do not know, because we have never attempted, in any of these programs, to find out what factors contribute to differences. The need for such evaluative designs seems obvious; otherwise, we will continue our buckshot approach to program planning.

There are many other issues regarding the disadvantaged which we need to face. One I have already mentioned is the issue of "racial balance." I agree that racial balance is a good thing; but if there are schools where some (presumably) optimum ratio cannot be reached, or if all pupils are Negro, then it still ought to be possible to develop a quality education program. There is nothing inherent in an all-Negro school that makes it impossible to have good education for those youngsters any more than is inherent in an all-white school to make high quality education. While we should implement all means for racial balance, reaching a numerical balance is not the ultimate goal.

The state of New York is talking about regionalization. Such plans can take in all of a metropolitan area but the problem of the intense inner-city population must still be solved. As long as we have private schools, and the suburbs to which people can escape, the impoverished ghetto school is likely to be with us. So let us say: racial balance is important. But let us ask: can we provide a good quality, integrated education in a racially isolated school? I think this is something we educators must be able to answer affirmatively.

Do we have any ideas on what a general education ought to be for an urban child? We will get these not by asking how to organize, but by asking what it is we are teaching these children. In our planning, we must talk in terms of educational content, methodology, teaching strategy, and instructional resources of all kinds.

Finally, I would hope that we would plan also for experiences outside the classroom and school. I think it is important to encourage the involvement of learners in volunteer work and in civic work, in community help where they can experience some moral commitment. I think that as important as is the teaching of reading and mathematics, we need, in addition, to teach pupils work habits, self discipline, cooperation, and all of the good old middle-class virtues.

The educational program which will insure a meaningful growth for the disadvantaged would provide a sense of attainment and accomplishment; would help youngsters understand their limitations and their strengths; would develop healthy attitudes toward self, toward school, toward society; and would generally turn the indifference, the antagonism of the disadvantaged child into self acceptance and self understanding. This represents content, although it is a different notion from that content we generally consider in curriculum planning.

Finally, I would simply return to my opening comments. I hope that twelve years from now, when someone does a survey on programs for the disadvantaged, he will find that we have dealt with the important issues of the differences in curriculum and content, that the programs now under way have deep roots, and that we will have arrived at some better answers to appropriate questions.

An Address by

KEITH R. KELSON

Deputy Associate Director
National Science Foundation
Washington, D.C.

Ladies and Gentlemen:

Before this afternoon session began, I heard a good deal of discussion about the advantages and successes developers of science and mathematics curricula have enjoyed in effectively reaching the disadvantaged students. There seemed to be some feeling that these successes could be attributed to the greater availability of money in these fields as compared with some others. Too, since science and math are objective, they do not become embroiled in the emotionally charged issues of value systems. This may all be true but it is not all the truth.

Let me tell you a story that fits many of those curriculum development groups. Almost anything one says about the disadvantaged is both too simple and too general adequately to represent the truth. And so is my story.

As you know, the National Science Foundation is responsible for supporting most of the major curriculum projects in the sciences. Remember that one of the Foundation's statutory missions is to try to improve education in the sciences in order to increase the nation's scientific research potential. Note that last phrase carefully. That is the legally stated purpose of the Foundation's program in science education. And it is to some degree the reason why NSF supports curriculum and course improvement activities. It is expected—and I think, not unreasonably—that students who undertake a really good, contemporary course of study are eventually more likely to increase the nation's scientific research potential, or at least do so sooner, than those who do not.

At the outset, most of the science and math course developers targeted in attitudinally on the more capable students. But in trying out their new materials on real kids in real classrooms they discovered something which was most interesting as well as rather unexpected. They discovered that their materials, although originally not so intended, were peculiarly effective with disadvantaged students. It was a kind of accidental success. Let me pursue this point a little further, in order that we may try to understand why this happened.

A few years ago it became clear to any reasonably observant citizen that our society would have to begin to pay special heed to the plight of the disadvantaged. We had to find ways both of preventing and of curing disadvantage, and of learning much more about this complex problem. Obviously, there would soon be a federal program for the disadvantaged, and on a large scale. But what would it do?

As our small staff in the Foundation looked at the prospect, we decided that the learning process had to begin and soon. Something had to be done to develop experience in programs for the disadvantaged and to identify individuals who were unusually effective in this area. NSF was at the time, I suppose, about the only Federal agency with the statutory latitude to move more or less at its own discretion. Accordingly, without public announcement, we began. We consciously selected the path of silence because we felt that the kind of educational experimentation we proposed to support is frequently attenuated by too much publicity. We actually solicited a handful of proposals, each relatively small and each representing a discrete and different experiment. They had in common little more than their common base of science and mathematics. We supported five or six projects a year for about four years. We were trying to learn and give others an opportunity to learn what approach would work with whom, and what would not. Our learning, as all learning, is never complete, but from these experiments we did learn a lot.

When the Office of Economic Opportunity emerged on the national scene, as well as certain large, relevant programs of the Office of Education and the Department of Labor, we felt that our self-assigned task of experimentation was done. Still quietly, we stopped our support of projects specifically aimed at the disadvantaged. We reported what we had learned to other agencies and went about our other business. There are some, however, who perhaps overly generously think that NSF has discovered or invented—or fallen over— relatively novel ways of solving some kinds of educational problems. They allege that although NSF stays pretty much in the science orbit, the methods it uses are applicable in areas other than science.

Thus, because of our earlier work on the problems of the disadvantaged, incomplete and tentative as it was, we were recently asked by higher governmental authority to prepare a paper, a "think piece," on the education of the disadvantaged. We did so. The paper is still an internal government document and not yet publicly available. Since I was not personally responsible for its preparation, I can say that I think that it is an extraordinary document. So, with your permission, I am going to depart from my usual custom of speaking extemporaneously and read certain sections of the paper. I think they will be helpful.

As a last prefatory remark, let me tell you something else we learned about working with the education of the disadvantaged. It is an aspect of the problem that I think will become (if it is not already) a most serious obstacle to constructive action. In fact, I have seen clear indications of it right here in this room. With respect to the plight of the disadvantaged there are two kinds of people: those who care, and those who don't; and constructive action is going to come only from the latter. The problem that those of us who care face is the great risk that we shall stumble over our own emotional involvement and fail to be as objective and analytical as the situation demands. In the course of the preparation of the document we "NSF'ers" have come to call the "disadvantaged paper," I saw even some of our allegedly fire-hardened professionals with damp eyes.

Let me turn now to that paper; I promise that I shall not read all of it.

> "We must recognize at the outset that the contributions which can be made to the solution of complex social problems by any single social agency are often overestimated, and especially so in the case of education. In considering the kinds of investment we must make to overcome the deprivations of our urban and rural poor, we need to be clear on just how much of society's obligation to the individual can be fulfilled by means of the educational system. The problems of the disadvantaged are not amenable to single-focus solutions. Economists argue for guaranteed incomes or family allowances; sociologists, for measures to encourage viable family patterns; political scientists, for the establishment of community cohesion through grass roots involvement in political action; psychologists and anthropologists, for development of pride in self and in one's own culture; urban planners, for improved housing and integrated residential neighborhoods; medical specialists, for health services—including birth control; manpower experts, for job training; lawyers, for availability of legal aid; and educators, for more money for schools. The effect of any one of these approaches designed to ameliorate a specific aspect of a complex problem is likely to be dissipated in the wealth of needs arising from all other unresolved aspects. It is necessary then to apply a number of social interventions, both those already known to be efficacious and those promising new ones, together with the increased efforts in education in a concerted attack on our major domestic problem. This implies a massive investment of funds and manpower, and a careful apportionment of resources among the different agencies through which our society discharges its responsibilities towards its citizens.
>
> "The causes of the widespread failure of formal education to meet the needs of today's disadvantaged are partly rooted in history and partly in the complex hierarchy of our value system. The mission of education in America has seldom been understood or stated properly. We set up an ideal of universal education that was unique, but borrowed existing models from societies in which only small segments of the population were regarded as the repository of the culture. Thus we developed a monolithic system designed in the main (though often badly) to further academic achievement along discipline-oriented lines, with college attendance as the goal conferring highest status. Because of underlying societal values this kind of education, even while deriving its overt content from intellectual disciplines, has evolved into a tool for economic and status advancement rather than into a framework for genuine intellectual endeavor. The low priority given to such endeavor is borne out by studies made from time actually spent on substantive teaching in the course of a school day, punctuated as it is by frequent interruptions for administrative and often trivial reasons. It is likewise borne out by the central fact that in most cases the teacher whose role it is to purvey the culture of a discipline, *e.g.*, biological science, history, English literature, is not even a genuine participant in that culture, *i.e.*, is not accepted as a biologist, historian, critic, or writer. No wonder that many of the youngsters, often the brightest, who are conditioned to go along with the system for the long-term economic reward it promises, become disaffected or cynical; and that many others not identifying with middle-class values—especially today's disadvantaged—find formal education altogether irrelevant to their lives or, at the very least, seemingly so."

Let me digress a moment and say that one of the problems that I, personally, see in the education of the disadvantaged is that, educationally speaking, they're myopic; they cannot see much beyond tomorrow. This is not intended to be a slur; how could it be otherwise for a student who wonders where tomorrow's meal or the next pair of shoes are coming from? When you take this student into a classroom and attempt to teach him algebra, you must forgive him if he cannot see far enough ahead to see any connection between algebra and what he considers is reality for himself.

> "The orientation of our entire educational system toward a single status-acceptable goal, and the investment of that goal with the appurtenances but not the substance of the intellectual disciplines, has resulted in massive failure to meet the diverse needs of people and of society, and most tragically so for today's urban and rural poor. If we are ever to achieve optimal educational opportunity for all, we must strive not for equality but for diversity in learning experiences matched to the differing needs of people, in the context of a diversity of equally acceptable goals.
>
> "While the Foundation's primary mission has been to increase the nation's scientific research potential and insure quality in science education, many of its educational programs have involved both disadvantaged students and disadvantaged educational environments. Students may be regarded as disadvantaged for a variety of reasons: economic need, social

and cultural deprivation, rural isolation, foreign language background and culture, slow intellectual or emotional maturation. Foundation programs have included students characterized by any of these factors or, more commonly, by several.

"Under disadvantaged educational environment we understand a variety of conditions by which the combination of facilities, teachers, instructional materials, procedure, and administration that together make up a school is severely deficient. For instance: smallness and isolation of schools in rural areas with sparse populations; consistently lower standards of teacher education as often found in segregated Negro schools; and the totally inadequate physical facilities characterizing many urban ghetto schools; all are contributing conditions.

"Foundation program activities that have special relevance to education for the disadvantaged fall into four broad categories: improving the competence of teachers; improving and modernizing courses, curricula, and teaching materials; providing special projects for superior students; implementing the introduction of desirable changes in curricula and instruction in schools and school systems. In providing support for a range of activities under these programs, special emphasis has been placed on the active involvement of scientists, mathematicians, and engineers.

"This emphasis derives from the view that in the past scientists have paid too little attention to the content of instruction in the elementary and secondary schools and indeed have often neglected teaching at the college level. At the same time, since the research community which the Foundation serves is made up of scientists, the Foundation has an opportunity to encourage their involvement and interest in the problem of improving the quality of education. While the initial intent may have been improvement for college-bound students, eventually the interest has broadened to include serving a wide spectrum of the school population. Through the work of the scientists and the many teachers and school administrators involved in the Foundation's educational programs, we have gained experimental insights that could well be the basis for further attempts to reach the disadvantaged through education.

"The following observations are grounded in experience with a variety of activities.

1. The subject matter of science and mathematics, because much of its content is not word-bound, is particularly rich in offering learning opportunities that allow disadvantaged children to experience success. It is therefore a natural medium through which to span cultural discontinuities without sacrificing intellectual content.

2. The difficulties with school experienced by inner-city and minority children often show, in amplified form, many of the symptoms caused by the deficiencies of our current educational system common to city and suburb alike. Curriculum materials designed to meet special problems of the disadvantaged frequently prove superior for other children as well.

3. Instructional situations should be arranged to take into account varying characteristics and learning styles. For instance, young children are curious, active, and friendly. Children from disadvantaged backgrounds tend to be motor-oriented, often have short attention spans, are used to tasks involving very concrete objects or services for people—but are not used to "school-type" tasks. Slow learners are not necessarily stupid but may simply exhibit different cognitive styles from fast learners. Some children will learn verbal and abstract skills only when they are transparently useful. Arranging instructional situations that take advantage of children's abilities includes the several mechanisms noted immediately below.

4. Concrete objects, from the simple to the complex, should be an integral part of the learning environment, including kit materials, devices, desk calculators and electric typewriters, mathematics laboratories, and computer terminals. Such materials permit tangible exploration, manipulation, and control of the environment, resulting not only in learning but also in increased self-confidence and belief in one's ability to master his world, characteristics so often lacking in disadvantaged children.

5. Curriculum materials built around real problems—or problems perceived as real—should be developed. Through these materials knowledge and skills can be introduced as needed rather than introducing discipline-oriented knowledge because it will be useful later. Curricula need to maintain a delicate balance between carefully wrought specific pieces designed to elucidate abstract concepts of a particular discipline, and learning situations so open that they frustrate.

6. Many possible routes and variable rates for arriving at curriculum goals should be available to students. There is much evidence that disadvantaged students, given enough time, can equal achievement levels of suburban children even with highly abstract subject content. This argues for some applications of individualized instruction without neglect of the tremendously important contributions of social interaction to learning. It also argues for the development of learning materials that are not grade specific.

7. As new materials designed for a variety of educational situations become available, institutes and cooperative college-school projects can function effectively to prepare teachers for their introduction into the curriculum.

8. No matter what other factors are present, the one really necessary element in success with education for the disadvantaged is to break the cycle of self-fulfilling prophecies of low expectation and low success. People, in school and out of school, involved in educating deprived children must project an honest belief in the student's abilities, a strongly felt desire for their success, a constant interest in each child's progress, and must be able to give immediate and numerous rewards in the form of praise for achievements. Perhaps such enthusiasm and idealism is the key ingredient in the success of young people as tutors.

9. Despite the discouraging statistics on increasing failure to meet the conventional norms as students move through the grades, it is possible to rescue students even in senior high school through intensive summer programs and academic year follow through. Here again, the subject matter of science and mathematics and the involvement of scientists and mathematicians have proved to be a prime vehicle for introducing students to a world (of science) which is real and in which real people participate, and in which the students themselves can acquire a stake.

10. Through institutes and research participation, through helping to create and introduce new curricula, and through continuing contacts with scientists, teachers can also become participants in the concerns of a scholarly discipline. Thus what they pass on to their students is not only more informed as to content but also genuine in terms of their own experience. Students of all kinds penetrate shallow and counterfeit teaching and are inexorable in their judgment of it.

11. Education of prospective teachers must include the same kind of involvement as in-service education, with both the substance and the strategies for learning of given bodies of knowledge. More teacher education should be centered on the very materials created for children, with the same kind of flexibility to explore alternatives from which a solid underpinning of factual and conceptual knowledge can be developed. Further, teacher education should include much more clinical experience than it does now, starting perhaps as early as high school, and continuing as an integral part of the college curriculum.

12. Beyond multidimensional curriculum materials and teaching strategies, and beyond properly educated and experienced teachers, a sympathetic and non-rigid administration is crucial in the success of any programs to further education for the disadvantaged. The bureaucratic constraints under which schools in big urban systems often seem to have to operate make it next to impossible to replicate any successes achieved in individual classes. The irrational incentive system in force in many places tends to set up for teachers and individual administrators conflicts between what they would like to do to educate and help their students, and what they must do to further their careers. We need new strategies for dealing with such problems if we want to make the wide-scale introduction of promising approaches possible in inner-city areas.

"The points made above imply that we have only begun to understand some of the ingredients necessary to make the educational system meet the needs of our diverse student populations, and especially those of the disadvantaged."

Can we break this cycle of poverty, undereducation, hopelessness, and the anti-societal behavior it produces? From the Foundation's experience, there are many hopeful indications that we can. But in order to do so on a significant scale rather than in isolated pilot programs, we must be willing to introduce some fundamental changes into our current attitudes and practices in education. And willingness means not only large-scale investments of funds and manpower, but also a rethinking of values.

Foremost, we must decide whether the educational system is basically a mechanism for homeostasis or dynamic evolution. If we truly believe that our culture is changing at an ever-increasing pace, and that education is essentially the process by which individuals learn to live in and contribute to a society and to shape that society through constructive rather than destructive action, then we must create the possibilities for continuous re-evaluation and change in our educational system. This requires an institutionalized base for experimentation and for introduction of all kinds of innovations. The history of American education is replete with promising new approaches that were tried out, found successful, caused small ripples, and then just disappeared from the educational scene. There is some evidence that current efforts, whether sponsored by the Foundation or by other agencies, will experience the same fate unless we can find ways to institutionalize change.

The second requirement basic to the correction of the mismatch between our current educational practices and the needs of the disadvantaged is to make education relevant to the students, to the community from which they come, and to the society into which they are, presumably, to move. Children in disadvantaged areas know by daily experience that what goes on in the formal school day has little significance for them, often has no point of contact with their own lives. We must find ways to break through the shell of noisy desolation in which so many of them live, to free them for involvement with the tools of learning without forcing them first to abandon their culture and become good middle-class children. And where isolated experiences point out such ways, we must try them and apply the successful ones on a massive scale.

Allusion has already been made to certain promising avenues. We know that many children, especially those lacking sophistication, can learn better through manipulation of concrete materials and situations than through verbal abstraction; that the science courses developed over the last decade have , especially through their emphasis on the problem-centered laboratory, been successful teaching vehicles for slow learners; that even written materials can present cogent ideas in styles that are more meaningful to children and more reflective of their own thought processes than the abstractions of the written English language; that the students' own efforts at self-expression, both verbal and written, can be used successfully as teaching material; that teachers must be educated to escape the boundaries of their own—often first-generation and therefore even more rigidly held—middle-class values; that more teachers, and resource and support personnel are needed to give more adequate attention to individual needs; that the school day and current inflexible grouping practices must be restructured.

Finally, let me remind you of some lines of poetry carved in the Statue of Liberty:

"Give me your tired, your poor,
Your huddled masses, yearning to breathe free."

Embedded in these lines is the statement of the American ideal. They contain America's promise to the world. The "poor and huddled masses" which we asked to be sent us and to whom this nation promised the gift of freedom and dignity are here. The test of the American dream is here and now. Can this society of which we boast really give them the freedom, the dignity, the opportunity we promised? Unless we succeed, man's most noble attempt to structure a society based on the worth of the individual will have failed. America, I submit, is on trial before the court of mankind. We have the capacity to win our case. We can. We must.

Thank you, ladies and gentlemen.

Based on an Address by
DR. R. LOUIS BRIGHT

Associate Commissioner of Research
United States Office of Education
Washington, D.C.

• Although the United States Office of Education is supporting very large operational programs for the disadvantaged, at the Bureau of Research we believe that the long term solution of these problems is not in the establishment of compensatory education projects, but rather in the design of an educational system which can adapt for individual differences. We mean the development of an individualized educational system, an individualized school, where individual students work at their own speeds with the materials most appropriate to their individual learning patterns, at a level at which they are consistently successful.

Such a system is particularly useful to the disadvantaged populations who are often highly mobile, changing schools very frequently. At the individualized school, people can enter at any time, at any level, and instantly pick up right where they are and go on. We have a few schools like this now in operation under the auspices of the Office of Education. For instance, in the Oakleaf School near Pittsburgh, where the elementary school now is almost entirely individualized, the children proceed completely independently of one another in most subject areas. On the other hand, this does not mean that they are alone all day; there are varied group interactions. But the groups are differently arranged than is customary, for the groups are determined by achievement, not age.

• In some of the materials distributed for this meeting, I read a statement from the Southern Education Report: "When we go into a middle class school in the city of Baltimore to study some learning abilities, we offer the children a prize to play some games with a technician. These pupils couldn't care less about the prize. They want to be right." But he doesn't go on to develop the reverse of this point. We have several programs under way which show that one very effective way of motivating the disadvantaged child is to give him a prize, using external motivators in a very carefully structured system. Work at the National Training Center for Boys here in Washington, work in Job Corps Centers (among others), show the value of contingency management technique, as some call it. The interesting consequence of this, moreover, is that another behavioral psychology principle begins to operate: any activity that is continually, positively reinforced becomes in itself a positive activity. A kid who will have nothing to do with mathematics, directed into individualized, programmed instruction materials so that he can go at his own speed and so that he is successful most of the time, will, after six weeks or two months, begin to like mathematics very much. Then, when he gets pretty interested in mathematics, it can be used as a reward for studying social studies. And it works.

• We also have a lot of data showing that student accomplishment is highly correlated with student self-image, with a feeling of being able to control one's destiny. Most people think that self-confidence leads to success, but some studies show otherwise. It appears more logical now to think that gain in self-confidence follows consistent success in a program. Consistent achievement yields self-confidence, rather than the other way around.

- The USOE policy in curriculum development is primarily directed to learning more about how disadvantaged populations learn. Our research is pushing our curriculum development problems into the direction, primarily, of the development of individualized materials.

In order to make a program which really individualizes materials (and of course, then, this means a program which really demonstrates the capabilities of all learning media, especially the technological), we need to have interdisciplinary teams. These teams need several components. First—and obviously—we need experts in the academic disciplines. Second, we need media specialists. Third, we need what I call the programmed instruction specialists—people who are versed in the modern technology of defining curricular objectives in terms of observable behavioral changes in the student; who are versed in designing criteria to determine whether or not these objectives have really been met and in setting up this criteria for immediate feedback. Fourth, we need on the team people representative of population specialists: psychologists, or people familiar with the characteristics, background, and other environmental experiences of the target groups for which the material is intended.

I don't know any curriculum development projects in this country yet that have been undertaken with this kind of team. It is an extremely difficult thing to accomplish, for by interdisciplinary team I mean expert people, with cooperative leadership (nobody, by definition, the leader), working together closely with continual interaction for the life of the project. It is perhaps in this manner we might really mount an effective attack on this problem of individualized instruction, which in turn will effectively attack the needs of our school population—*all* the school population.

APPENDIX ONE

1. Background Papers Prepared by Population Representatives

SOME CONSIDERATIONS IN DEALING WITH SOUTHERN URBAN NEGRO CHILDREN

Mary Y. Greene
Capitol Avenue Elementary School
Atlanta, Georgia

Concern for the disadvantaged in our country has continued as a growing concern since 1954. Since that time and in larger degrees, attention has been focused on conditions of poverty and educational deprivation of the peoples of the world.

Although much is being done to close the gap between the urban school's excellent or gifted and its vast ocean of disadvantaged, there remain gross inadequacies. We cannot continue in this direction; some more effective plan must be devised for converting the strengths in the life style of the disadvantaged population into effective means of educating this same population.

Rationale

Newspapers, magazines, some educators, and the public generally agree that the majority of urban and rural slum schools have failed in their mission of educating the children. Is this a fair accusation? What the school is and what it has done for public education have been directly related to the needs and wants of the people served by them. Can we say that this is true, generally, of the urban inner city school?

Children who live in these areas where they are beset by a multitude of personal, social, health, and economic impoverishments have little to bring into the school situation which would add significantly to promise of success in school. The cultures from which they have come are far different from that reflected by the school, which has structured its curriculum, formed its philosophy, and set its expectations, by middle-class values. Expecting these children to manipulate with success this type of environment without some special assistance places a great burden upon them, which, in turn, often creates learning and behavior problems.

Who are the Disadvantaged?

Basically, the disadvantaged child, regardless of economic status, race, or religion, may be either the most neglected child or the most loved child. He has been locked by his environment within a circumscribed area without communication with the outside. He might live in the shadow of the Capitol's dome, but has never dared to climb the steps to see what's inside. On one hand, he can be the child who is born in the big city hospital or the rural child who has been transplanted to urban life where his roots are never quite firmly planted. The urban child who has never observed the stars at night or smelled freshly mown hay is as deprived as his rural brother who has never visited the museum or enjoyed a ride on the trolley. Linda, a sixth grade pupil of an urban school, inquired of her teacher on a visit to a department store: "How much do you have to pay to ride on the moving steps?" Linda was born and reared in the slums only two blocks from downtown.

Many of the disadvantaged children live either in cramped apartment buildings or once fabulous family dwellings now converted to "room-by-room" tenants. The family unit consists mainly of females: mother, grandmother, aunt, or friends. If there is a father, he works during the waking hours and is seldom seen by the children. Communication in the home is limited. Much of the family communication is non-verbal: the toss of the head, gesture of the hand, or a nudge of the elbow. A large number of these children have health problems and spend periods in the hospital for treatment. Many families have histories of mental illness. In still others, some member of the family is presently confined in a mental institution or in a correctional institution. Because of the poor diet and eating habits, many of the children are always tired and fall asleep easily; they do not desire to engage in play activities because of lack of energy. Their clothing is dirty because there is neither soap to wash them nor money to take them to the laundry. The child has no soap with which to take a bath, yet he is scolded at school or sent home to "get clean."

Like children in other places, however, the disadvantaged child dares to do like the Phoenix. He has hopes, interests, aspirations which, although differing somewhat from those proposed by the school, can be understood and appreciated by those who seek to work effectively in this area.

Characteristics of the Disadvantaged

Strengths. The disadvantaged child, in spite of other deficits, enjoys a closeknit relationship in his family. Family members are generally concerned about the welfare of each other.

> Jimmy is a boy of 12. He has two younger brothers and a sister who is much younger, 4 years old. The father left the family when Jimmy was small. At school Jimmy's work habits are poor. Most of the time he shows no interest in school activities. He demonstrates aggressive tendencies. He adores his baby sister and often serves as baby sitter for his mother who works. Jimmy admitted that he stole

an overall suit and a stuffed toy for the baby sister. Much of his fighting is done in defense of younger siblings. He will leave class to check on attendance of brothers and on their lunch arrangements.

Many of the strengths of the disadvantaged child can be used to enhance his learning. As one first grade teacher stated, "It is true that the children live in an undesirable environment. They do not always show this. They are likeable, lovable children who have many strong points. Although they do not have much money, they are willing to share. They generally like to come to school and, oddly enough, many of them like to stay on around after school has been dismissed."

Because they must assume adult responsibilities such as baby sitting, washing, paying bills, shopping, they grow up quickly and are responsible individuals where common-sense things are concerned. They are capable of working hard on tasks which show relevance to their situation. A large number of disadvantaged have a language of their own which is functional in their immediate environment. Others may seem more proficient because they have vocabularies barely good enough to disguise or mask their real language problems. Unusual experiences impress them, especially those involving sensory activities, touching, feeling, tasting, seeing, hearing.

Weaknesses. One basic weakness of the disadvantaged child is the language problem. He lacks adequate knowledge of names or signs that stand for objects, acts, attitudes, relationships. He cannot deal in abstractions. As an example:

> Sharon, who is a first grade girl, was asked to name a picture showing household items. She referred to the iron as a "masher." The teacher was surprised, but the item had been called by this name in the home.

Because they live in a crowded, noise-filled environment, many disadvantaged children have become skilled at closing out noises not wanted. They are often poor listeners. This weakness can present serious problems in vocabulary and reading activities. Many deprived children are unable to form plurals when they are in second grade. Their powers of attention and retention are poor. The environment of these children is, for the most part, barren of books or desirable literature. They do not see adults about them reading. A great part of their day in the home is spent in front of the television. Many of these children harbor feelings of hostility, distrust, inferiority, and hatred of their surroundings. These feelings often result in emotional disturbance which interferes with learning. In the community the general aspirational level is low. The child has limited motivating force and limited aspirations result. In some instances lack of proper immunization and the absence of a birth certificate delay school entrance. The child is then brought to enter school when he is seven or eight years of age. He becomes a misfit in the class and is ashamed to perform.

Disadvantaged children have a number of deficits or limiting factors. They fear failure, and teachers must not expect too much, too fast, from them. With the right approach and mutual respect, many of these children can learn and become self-purposing, self-disciplined individuals. One case illustrates this:

> Gloria, a fifth grade girl, was 14 years of age. She could read on the second grade level. Each morning when sent to school, Gloria refused to come and stopped at a local service station. Her mother worked at the airport. After six months, the teacher left school on maternity leave. The teacher who replaced her was entirely different in her understanding and treatment of the pupils. She readily recognized Gloria's plight. After a series of informal and standardized reading tests, she placed Gloria in an after-school enrichment-remedial group, using programmed materials and other audiovisual materials. Gloria worked well with the Language Master and enjoyed showing her completed worksheets. Meanwhile her attitude toward herself and others changed considerably. Her school attendance improved. Her interest in reading was increased to the point of securing books from the ESEA library. Gloria remarked to the principal one morning as she walked down the hall, "I like Mrs. Evans. She helps me and does nice things for me. Do you want me to come down to read to you?" At this point Gloria has completed five books in this program and is much more confident in her class relations.

Here, one teacher's insight, empathy, and concern resulted in learning, where before only doubt of ability and anxiety existed.

Values. Values of honesty, truth, self-respect for property, and for all human life can be a part of every life, at every social or economic level. Contrary to what is generally thought to be true, many disadvantaged children have a strong sense of moral and religious values. Yet, there exist among some strong feelings of rebellion and resentment of authority. Many communities are moving to erase this image by bringing into the classroom law enforcement officers and other city officials to talk and play with pupils. The definition of honesty and integrity for the disadvantaged differs from that of the middle class. He interprets it in terms of personal convenience. In many instances there is a seeming lack of shame and an attitude of "I'm due that, so I want it now." Attitudes toward property of others sometimes get very personal. They take freely from others. This can be seen from a brief description from information on Terry:

> Terry is a second grade boy. He comes to school for the afternoon session. His mother pays the family rate, two dollars per month for six children to eat lunch daily at school. On his way to school Terry terrorizes kindergarten and first grade children by threatening to "beat them up" if they don't give him

their lunch money. Terry is only 7 years, 8 months old, but he is very large for his age. When asked why he did this, his reply was: "I wanted to go to the store."

This little boy had no shame about what he had done and talked freely about it. Stories, filmstrips, poems and role playing were used in this classroom to help the child see the relationship of his acts to others in the room. It is very important that the teacher understand and consider attitudes of children before attempting to change them. Seeing the children as victims of their home and environmental cultures, school personnel must give them empathetic and sympathetic support at all times.

On the plus side, however, some planned activities do get through to the disadvantaged. After a summer course in the humanities Ted, a high school boy of 15, wrote: "I have been exposed to the ideas of others concerning the society in which we live and I have been given the opportunity to develop my own." With this inspiration he was encouraged to change his emphasis in the high school course to an academic rather than a vocational one. He remained in school until he completed his work. Before this he was a potential dropout.

To illustrate that as values are changed, attitudes are also affected:

> Teretha, an eighth grade girl who had been an under achiever in the upper elementary grades, made this statement after participating in an art class during enrichment: "New fields of learning have been opened for me. I have begun to appreciate real art. My opinion of art, especially contemporary, has grown from indifference to a sincere respect for it."

Exposure to art through trips to the museum, collections placed in the schools, the library, and an interested teacher made a difference.

There are standard values such as courtesy, respect for personal property of others, citizenship, loyalty to family, country, and friends, truthfulness, reverence, respect for law and order, justice, which the school should endeavor to communicate to the disadvantaged child.

Creativity. In order to solve many personal, social, and economic problems of our day we need creative individuals who will be capable of providing unique solutions to the future economic, political, civic, and diplomatic problems, and to better education for children of the future. What does this imply for schools with disadvantaged populations?

It simply means that those schools serving disadvantaged areas must change from approaches which stress the negative aspect of the environment of the disadvantaged to those approaches that place major emphasis on the positive strengths in the child's culture.

The disadvantaged child has a great deal of latent talent in areas such as music, rhythm, art, sports, drama, or role playing. Many of them employ imagination as a means to escape the hard, cold realities of their daily living experiences in their environment. Through such activities they reveal much of themselves, their worries, their fears, their hopes and desires. They respond well to visual, tactile, and kinesthetic stimulation.

Creativity for the disadvantaged is a personal something, a style of assimilating. The pupil assimilates his world, that is, he sees it in his own way. Sometimes he meets situations which he cannot readily assimilate into his view of things, so he has to change his view; he must adapt it if he wants to incorporate this new view or this new item of experience in order to make it a part of his very own. The combination can and often does result in a unique new pattern.

By this manipulation of environment and assimilation, disadvantaged children often test out ideas. In this way they can understand cause and effect relationships. Then by what they see and hear each day, they gradually put the parts together into some organized and understandable whole.

The following from a case history indicates potential as released in a seventh grade boy:

LeVan, a twelve year old seventh grade boy showed superior intelligence and great sensitivity to the arts. He was a superior student in all academic areas, but intensely interested in science. His family had a history of musicians. While LeVan played the trumpet well, he was not very interested in high achievement in this area. He read all of the science books he could find. He performed a large number of science experiments. When the time came to choose a project for the annual Science Fair, he wanted to work alone. The theme for the Science Fair was "Scientists at Work." Having been impressed by a visit to the George Washington Carver Museum at Tuskegee Institute, LeVan chose Carver as his project.

LeVan had shown some artistic ability when he created some figures for the school newspaper. However, he had experienced no activity in sculpture. Along with his paper-mache items depicting products made by Dr. Carver, he worked long, hard hours to create a very good likeness of the bust of Carver from clay. The school had no kiln so the resource teacher in art agreed to glaze it for him. The smile on his face and the light on his eyes were most heart-warming as he exclaimed: "Golly Gee! I never thought it would look like that. I want it to be in the library like the one down town." The sculptured piece remains on the shelf in the school library with LeVan's name on it. From this venture his interest was led into literature and mythology. The discovery of this creative potential was used to expand his interest and inquiry into other areas.

Broderick[1] indicates that—

> —being highly creative means something other

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[1] Broderick, Mary, "Creativity in Children." *The National Elementary Principal* XLVI: 2; November 1966.

than being intelligent, competent, able, or skillful. To be creative means to be original. The creative individuals have a tendency toward divergent, nonconforming solutions that are essentially novel and include signs of curiosity, flexibility, redefinition, self-feeling, originality, and insight.

These disadvantaged children, like others, can do a number of things well. They do possess creative talent which might be used as starting points for further development and growth.

Implications

Teachers. Those who work with the disadvantaged child will need to be aware of his learning style. Teachers must let the child know that they expect him to learn, to succeed instead of assuming that failure for him is inevitable. If children are expected to be "dumb" they tend to respond in that way. If the teacher is aware of the positive potential she will not only expect more but demand more of the disadvantaged and thus will get more from them.

Materials. Schools that educate the disadvantaged must provide a wide variety of materials and a great degree of flexibility of resources to compensate for the lacks in the environment of the children. Curriculum offerings can be in tune with the previous experiences of the children and enlarged upon as they progress. Materials which provide a format of repetition enable pupils to grasp ideas and to move forward even if at a slow pace. They need experiences with concreteness from which they receive meaningful experiences in visual imagery and discrimination. New dimensions of learning experiences will need to aim at the development of concept building, development of oral language facility, critical thinking, and broader understandings of human relations.

Questions in Focus. One reason we so often fail to provide suitable or adequate materials for the disadvantaged might be that we have yet to become familiar with their needs and with the skills possessed by them. Therefore we have some questions yet to be answered:

1. How do the disadvantaged differ from the main population of the public schools of America?
2. What are some of the modifications and compensations which must be considered before producing materials for them?
3. Which is of more importance in teaching the disadvantaged: the content of the subject matter, or the skill of the teacher in presenting this material?
4. How can one who produces materials cope with the problem of needs unique to certain cultures?
5. How can learning materials be used to aid pupils in the process of manipulation of things, ideas, concepts so as to relate more successfully to environment?
6. Can adapted materials provide for sequential reading skill development in the same way as does the basal reader?
7. Since disadvantaged pupils bring into schools such diverse backgrounds which contribute to their differences, how can these differences be treated or erased through synchronization of learning materials?
8. Do disadvantaged really differ in skills or in their ability to apply these skills to learning experiences in a meaningful way?
9. How can the idea of massive general transfer play an important part, for instance, in science teaching? How much relativity ought it have for the disadvantaged child in his environment?
10. Will materials produced take into consideration "where these children are" and proceed to find appropriate teaching materials and techniques for these needs?

Perhaps these isolated bits and scraps about the disadvantaged child of the urban inner city school, his strengths, weaknesses, and expectations will add up to a faint revelation about his learning potentials as well as his learning problems.

We who have worked with the disadvantaged in the urban inner city schools, have secured and used a variety of teaching materials. We have employed the help of many professional workers. As a result, we have seen slow, but steady growth and progress made by them. If these children have yielded somewhat to the strenuous efforts made, we can be assured that even greater strides can be made toward eradicating the social and educational blights of illiteracy and ignorance in order that the promise of a good life for all might be a reality.

SOME CONSIDERATIONS IN DEALING WITH AMERICAN INDIAN CHILDREN

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My introductory remarks will include, but not be limited to, the following:

A. The statements will be predicated on the assumption that the children being discussed are reservation-oriented and reservation-based. This is in contrast with off-reservation Indian children who in most instances are not faced with the problems, needs, and environment which faces reservation children. Of course, if the parents of these children locate in city slums or poor areas then the problems are much more complex.

B. The organizing idea, "Creation and Manipulation," is very interesting and will definitely point out some real problems which face American Indian children. For example, the thought of manipulating environment may definitely clash with the traditional Indian teaching of "harmony with nature" or "no control over nature."

C. There is little doubt that Indian children are frustrated in their outlook on life because the need to live, adjust, and produce in two almost divergent cultures is tremendous. For instance, the child while he is at school must accept non-Indian teaching; whereas at home he lives, eats, and is an Indian. The question arises: Does the Indian child possess enough sophistication and knowledge to be able to rationalize and handle this conflict?

The Indian child's psychological, emotional, and social development is basically the same as that of any child. However, certain unique factors which affect the Indian child are not found in the non-Indian world. Too, the Indian child does have very definite and distinct problems in areas that do not present any difficulty to the non-Indian pupils. These factors would include the following:

A. Parental Concerns
    1. Comfort
    2. Acceptance
    3. Shelter

B. Academic Achievement
    1. Reading
    2. Oral expression
    3. Abstract thinking—reasoning

C. Cultural Differences
    1. Reason for differences
    2. Similarities
    3. Conflict of teachings
    4. Dominant society

D. Peer Acceptance
    1. Discrimination
    2. Competition
    3. Communication

The environment of the Indian child is much different from that of the non-Indian child and even the culturally disadvantaged child. The isolated situation of reservations presents problems that are not found in the non-Indian environment. This geographic isolation of the reservation automatically limits the range of experiences that an Indian child can have. This is further affected by the extremely poor and undeveloped conditions of the reservations in general. A child growing up in this environment definitely has a very deficient background over which he has very little control. The discussion of environment and limitations of experience will include the following factors:

A. Isolation
    1. Geographic
    2. Intellectual
    3. Academic

B. Environmental Deficiencies
    1. Lack of facilities
    2. Lack of conveniences
    3. Limited representation of professions
    4. Minimum exposure to other cultures

C. Undeveloped Areas
    1. Poor housing
    2. Health conditions
    3. Transportation

D. Parental Attitudes Toward Education

E. Tribal Customs, Mores, and Attitudes Toward Education
    1. Government structure
    2. Leadership

The adult Indian on the reservation has formulated many misconceptions about education specifically and the non-Indian world in general. These misconceptions have found fruitful ground on which to grow because of the isolated situation on the reservations and the limited impact of modern American society. These misconceptions are passed on to the child and find seed in young minds. The situation will continue to exist so long as the reservation situation remains as it is. The many misconceptions that Indians have include, but are not limited to, the following:

A. Education alienates.

B. Indians are not intellectually or academically oriented.

C. Non-Indians are not to be trusted.

The pleasures of the Indian child are not much different than those enjoyed by his non-Indian counterpart. The Indian child is interested in deriving pleasure from a beautiful sunset, a work of art, or doing a good job—just as his non-Indian peer.

The Indian child finds pleasure in play, in fantasizing, and in other activities much like the non-Indian child.

The interests of the Indian child are somewhat restricted because of his isolated situation on the reservation and his lack of exposure to the outside world.

His long-range interests differ because of the above situation. The discussion of pleasure and interests of the Indian child will include the following:

A. Immediate Pleasures
  1. Difference, if any
  2. Gratification

B. Long Range Interests
  1. Type
  2. Rationale

C. Immediate Interests

In order to better understand the Indian child the preceding factors, pleasures, and forces must be considered fully and understood. The teacher, administrator, or curriculum developer needs to be aware that there are distinct and unique factors that affect the Indian child's development.

The conclusion which will be made from the presentation will be based specifically on the contents of this presentation.

SOME CONSIDERATIONS IN DEALING WITH SOUTHERN RURAL NEGRO CHILDREN

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"Curriculum" here refers both to the content of the teachers' higher education and to what goes on in the child's classroom. This would include the teacher's outline, the children's books, and any other audiovisual material.

Many of the factors which I feel to be important in the training of teachers prepared to teach southern rural Negro children would also be important in the training of all teachers; most of these ideas would be relevant to teachers prepared to teach any minority group, particularly Negroes. First, I think the teacher should have a solid background in sociology, particularly in the understanding of minority groups and in the realization of how cultural values are related, one subculture to another. The prospective teacher should have a good working knowledge of Negro history, as nearly up to date as possible.

The reason for this orientation is obvious. The teacher should not only understand where the Southern Negro child is now but why he is that way, how he got there. Without the historical and sociological perspective, many teachers, white and Negro teachers alike, might gradually grow to look at these children as innately inferior; or they might grow to feel that the parents were completely responsible for the disadvantaged background which these children brought to the school. Either view would eventually come to the same end. I would hold that any teacher who believes in racial or class inferiority—no matter how subtle this belief—will fail in the teaching of these children. I do not mean to pretend that the study of sociology and Negro history could dispel prejudice; emotion is probably a much larger factor than any intellectual experience could be. Still, the intellectual support of an emotional idea can help to carry it when the going gets rough sometimes.

Teachers should also become aware of the learning style of certain minority groups, including rural Southern Negroes. For instance, teachers should be aware that disadvantaged children often have more physical than verbal styles of learning. The teacher should learn how to use to the best advantage this physical learning style; but, just as important, he must understand why the child has a physical rather than a verbal learning style and he should not consider one style inferior to the other.

The teacher should be taught to create his own curriculum, or at least to be able to modify the curriculum created for him, so that this curriculum will be relevant to the children right now. Perhaps student teachers could have curriculum-planning seminars or perhaps they could be given an experimental class where there was no curriculum already written, where they would be forced to create their own curriculum. Although most people would admit that this is important for all teachers, I feel that it is even more important for teachers of the disadvantaged, for these teachers will have children whose experiences are further removed from the standard curriculum than are most children's.

I have often heard many educators say that if all teachers were creative one would not need curriculum. I believe that teachers can be taught to be more creative and, if not very creative, at least innovative. I believe that if all potential teachers realized creativity would be demanded and rewarded, we would have more creative people going into teaching. If teacher training and selection were as it should be, there would be relatively little need for curriculum reform at the elementary and high school level. Since all is not well with the teachers we have, curriculum remains significant.

Curriculum should be modified for Southern rural Negro children. I believe that in the first four or five years of school the disadvantaged children are going to need every advantage we can give them. By modifying the curriculum I do not mean to make it easier, but to involve many of the special experiences which this disadvantaged child will have known which are not usually put in standard American curriculum. I feel that these experiences are broad and extensive enough to be called a body of knowledge. In fact, I feel that it would be a very good thing to put some of this material into standard American curriculum. However, I realize that every minority group has its own body of special knowledge and that each group would consider it significant enough to be put into a standard American curriculum.

But I do contend that a certain amount of this body of knowledge should be put into all standard American curriculum in order to provide an understanding of a significant segment of America's population. I also feel that a much larger part of this body of knowledge should be put into the curriculum (this includes the teachers' plans and the school books) of Southern rural Negro children. Moreover, this special body of knowledge should be included at the earliest years of school for the child. For instance, the child's first reader should be about things in which he is the most interested. The characters should certainly include Negroes in status roles. The plot should contain certain aspects of rural life that children are most interested in: a child finding a snake, or a boy hitting a home run in a baseball game, or perhaps a hurricane and the resulting flood which ruined a crop. I believe that the high interest level of these materials would induce the child to learn the basic skills of reading.

There should also be a gradual phasing in of the standard American curriculum. This should probably be completed by the seventh or eighth grade, for by that time the child's attitudes toward learning and the school are pretty nearly formed. Hopefully, by the eighth grade he would have a solid foundation in skills and a positive attitude toward school and learning. It would be a tragic mistake to assume that one had to keep a special curriculum in use during the child's whole school experience because one felt that he could not learn the standard American curriculum.

I feel that curriculum modification should be most important in the language arts. When children are learning to read, write, and speak, the material must be of high interest. The science curriculum should also be modified to some extent. I see modification here for positive reasons rather than negative. The Southern rural Negro child grows up exposed to a good many more things having to do with nature, weather, animal and plant life than do his suburban and city counterpart. We really should take advantage of this exposure. In history the heritage of the American Negro should not be ignored as it now is.

Curriculum modification should be so spelled out that a teacher who is basically not too creative, will at least know where to start. The curriculum should give specific examples of physical things that the children can do in order to learn certain concepts that are formally learned verbally. It is obvious that these suggestions will do little good unless the classroom teacher knows some of the facets of this subculture herself, and views it with respect. Ideally, teachers should learn about this subculture in their teacher training; however, I think the elements of the subculture can be learned relatively quickly if the teacher has the proper attitude toward this learning. The teacher can learn a great deal from observing her classroom. Since many teachers are quite conscientious about following instructions from superiors and going by the book, perhaps curriculum change might really be effected in this way, (since this modification would come from "on high," so to speak).

Outline of Main Concerns of Rural Children

I have divided this outline into three sections: present, past, and future.

Present—is what the children are interested in doing right now, what they are thinking about right now, what their concern is about the immediate environment. This topic is also probably a catch-all for any ideas that do not fit in the other two topics.

Past—is what the children might talk about when they discuss what happened last year and what things they would consider to be most significant in their own past. They probably also would be interested in hearing an adult talk or read about these subjects in his own past.

Future—is what I think the children are really concerned about in their own future. This is what they expect, and want to do and be.

I. Present

A. Interests
   1. Sports (baseball)
   2. Strength, competition
   3. Music, dance, song
   4. The grotesque, gory
   5. Race
   6. The supernatural, superstition
   7. Television

B. Heroes
    1. Sports figures: Willie Mays
    2. Soldiers: Marines, Green Berets
    3. Show business, soul music: James Brown, Otis Reading, the Supremes
    4. Civil Rights: Martin Luther King, John Kennedy, Stokely Carmichael

C. Problems
    1. Lack of money
    2. Isolation or lack of transportation, hampering recreation and any group activity, breadth of experience
    3. Too much farm work
    4. Nothing to do
    5. School and teachers

D. Fears
    1. Physical violence to themselves
    2. Snakes
    3. Water and boats; flying
    4. White people
    5. Supernatural "haunts"

E. Questions about the present environment
    1. Weather
    2. What makes other people (siblings, parents, playmates, teachers, white folks) act "that way"?
    3. Questions involving machines—how does a car run faster?

F. Common misinterpretations
    1. Nature and ability of white people, their wealth, intelligence, morality
    2. General lack of sophistication about money, politics, power structures

G. Limitations of experience
    1. Lack of travel
    2. Paternalistic parents, teachers and adults; the youngsters don't get to make many decisions
    3. Lack of magazines and newspapers
    4. No exposure to any "long hair" culture
    5. Very little recreation other than dance and baseball

II. Past

A. Hard or difficult farm work

B. Whippings one has received

C. Fights one has been in

D. Gossip about Negro adults

E. Encounter with cars and tractors, with certain animals—mules, dogs, bulls, bees, roosters

F. Past experiences of children who previously lived in a northern state

III. Future

A. Going to a northern city
    1. What will the trip be like?
    2. How dangerous is it? "Will I get my throat cut?"
    3. How tall and big are the buildings?
    4. Will we have more money there?

B. High school—what will it be like?

C. Integrated situations—what will happen?

D. Owning and/or driving a car

E. Getting a job; having some ready cash

F. Joining the armed services

G. Sex

The age range I am emphasizing is third through eighth grades.

I am not sure how much of my outline relates to the idea of relativism; but in the actual presentation, I feel sure I can make it fit into the discussion framework of relativism. In some parts of the outline I have listed interests that these children have which children from other specific populations would not have. For instance, the interest in dance which I have listed in a number of places for these pre-adolescents would not be existent in a similar white population.

In my work in rural areas, and in preparing this paper, I have discovered something which I feel is significant. I have found that if a teacher, a tutor, a civil rights worker, a parent, or sometimes even an older brother or sister, takes a real interest in these children and is both enthusiastic and sensitive to them, they become very "turned on." **Under such circumstances it is difficult for me to any longer consider these children disadvantaged youth.** It almost seems that we may not need to specialize our materials and curriculum to the interest and environment of these children; perhaps, what is essential is that we believe in them and give them the same fair chance that three-fourths of the children in America have. The problem is that many of the significant adults in these children's lives do not seem to believe in them.

In terms of action, I personally have found that the children are interested in almost anything we decide to do together; then, after we have done something—a trip, a game—the children are interested in talking and reading about that. The children have been exposed to relatively few stimuli, but relative to other specific populations of children, these Southern rural Negro children are very receptive to new stimuli. I assume when you say Southern Negro rural population you also mean relatively poor population. My outline does not place an emphasis on the middle class children in this population.

SOME CONSIDERATIONS IN DEALING WITH MEXICAN-AMERICAN CHILDREN

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We feel that the following reforms must be made in public school education in New Mexico.

We urge that the public school system in New Mexico adapt itself to serve the needs of each major cultural group within the state, and to exploit the cultural diversity of the state. The content of public instruction is at present too uniform throughout the state, and recognizes too little that Spanish and Indian children differ from Anglos in their backgrounds, aspirations, and expectations.

Our specific recommendations include (a) expansion of Headstart programs with the goal of permanent kindergartens throughout the state; (b) bilingual instruction in all grades; (c) employment of the well-established techniques of teaching English as a second language; and (d) insofar as possible, adoption of teaching materials which are relevant to the cultural heritage and ecology of the Southwest. While we recognize the fiscal saving in using nationally published and standardized textbooks, we deplore the absurdity of social studies units for primary students on New York as a natural harbor, literature and history texts for high school students which assume that American culture began with the Plymouth colony and Virginia plantations.

Non-Anglo students tend to feel that public schooling is irrelevant to their needs. We agree that as presently organized, it often is. We feel that education closer to the culture of Spanish and Indian students would improve their enthusiasm to learn, would be reflected in statistics such as the dropout rate, and would tend to improve the proportion of adult Spaniards and Indians who are employable.

The foregoing was a statement which was arrived at by a group of people in consultation for four days. It is a conclusion which leads one to understand the frustrations of Spanish-speaking and Indian-speaking students whose whole background is ignored primarily because of the ethnocentric attitude of the educational institutions. The underlying implication is that the cultures which are different in essence are largely ignored in the educational process. It is further believed, by this writer, that unless materials are developed which emphasize the variety of cultures which exist in this country, the concept of cultural relativity as a value in American society is impossible to obtain. In addition to that, it is virtually impossible for a group of young people from an ethnic minority to develop wholesome self-concepts when something which is an intimate part of their background is being so largely ignored and very often downgraded. Cultural relativity is important, also, in terms of the biases with which the educational institution approaches the social structure and cultural patterns of peoples from minority groups.

In New Mexico, the whole aspect of the family as a unit of social organization is quite different in many respects from the normal middle-class nuclear family which is prevalent in much of the American society. Curriculum materials whose primary focus is on an urban setting further compound the problem of relating the materials through the lives of the largely rural population. Broadening the understanding of peoples of a variety of cultures would provide a base upon which to appreciate the ways of people in other countries. If all of these cultures, including the one from which the student comes, are largely ignored, it seems the development of attitudes toward the one predominant culture will very often be one of hostility. A recent graduate from high school indicated to me that after graduating from high school in a rural community, he found the educational experience totally incongruous and irrelevant to the experiences he later faced, either in the rural community or in the urban community. Therefore, it seems at this time that curriculum materials must be more specifically adapted to the needs of people being served by the schools in the locality, and that teachers must be provided with mechanisms to adapt subject matter content to the orientations of people of different ethnic groups.

Children of Mexican-American descent have a number of concerns which impinge on their experience in school:

1. A largely different family structure, especially in rural areas (differing roles, extended relationships, etc.).

2. A strong community identity and therefore strong interest in that community.

3. Distinct orientations to time and nature.

4. Very strong orientation toward the immediate physical environment.

5. Limited life experience outside a relatively limited geographical area.

6. Inability to comprehend what is required in the school environment in terms of their role expectations.

7. Inadequate understanding by the child of his own background in reference to "school culture," thus little reference for understanding other values.

SOME CONSIDERATIONS IN DEALING WITH CENTRAL URBAN NEGRO CHILDREN

Mrs. Jeanne Walton
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Washington, D. C.

The Girard Street Project[1] tells the story of a block project organized by a church in a poverty area (Cardozo) in Washington, D. C.

I would like to quote here the description of the group with which the church worked. I think it fits the parents of most urban, inner city Negro children.

> The group that we worked with and which was receptive to help was one that can be described as poor with middle-class aspirations. This large group encompassed people with different problems and potentials. Some of the families in it were poor because of insufficient education, racial discrimination in housing and employment, and exploitation. Other families who belonged to it had, together with these external handicaps, problems of a personal kind. They did not have enough emotional stability and intellectual resourcefulness to construct a meaningful life for themselves. In spite of their personal diversities all members of this group had aspirations to middle-class standards and professed middle-class values. In our opinion this was the group which needed and could use the kind of help offered by a community organization.
>
> The group was composed of families who had some kind of employment potential and who found jobs even if they were often unemployed for longer or shorter periods. They lived under the tension of the discrepancy between their values and their poor living conditions. They had an image of what they would like their lives to be but could not achieve their goals because they had no education and because they were Negroes. Barely keeping their families together, living in terrible housing conditions, forever struggling against poverty and disease, little by little they were losing the uneven battle against a system that keeps them in bondage. Their bitterest defeat comes when they realize that their children's future is no better than their own. Their children, growing up in a poor neighborhood, getting a poor education, are slowly seduced away from the middle-class goals their parents hold out to them without being able to show them how to reach these. Thus the children emulate those whose success seems quick and easy—the racketeer, the criminal, the prostitute. The children are exposed to the worse elements of society as soon as they step outside their crowded apartments. To protect children from bad influences in such a neighborhood is an impossible task, because the street is the only place for them to go.

In evaluating the project the author says,

> . . . The desperately poor, those with acute housing problems, the deviates, the delinquents, are not helped. . . . Another adage of social work is that once people are properly motivated to help themselves, half the battle is won. In our experience, this did not prove true. The motivation is present and it is easy to stimulate. The true test of the project is whether it can produce any realistic, practical means by which to satisfy this drive for betterment. In our experience with housing . . . the main problem was to find ways to stay ahead of the motivation that carried the participants on and to prevent repeated defeats. It is easy to get them together and to get them to work to improve conditions. But the organizer must be aware of all the pressures and oppressions that the people had already encountered and must find new, more effective ways to cope with them.

In this report the children are described thus—

> Some children, although attending school, did not know their names or their ages. Most of them could not identify their fathers by name, nor could they give an idea of their parents' occupations. Most did not know their addresses. Children in the second grade did not know the names of colors. Some children in the first grade did not know the names of everyday objects around them, and abstract ideas and concepts were strange to them. Many in second and third grade had not yet mastered the simple techniques of coloring. The whole concept of reading was a mystery to some children eight, nine, and ten years of age.
>
> But what was saddest was the inability of the children to communicate with other people . . . and so, instead of speaking (they) acted out their feelings.

And, speaking of older children,

> Subject to emotional and material deprivation in their homes, these children found in their daily life a world that seemed to them to be hostile. They felt rejected by society. Their hopes for the future were thwarted. Thus they never developed any sense of trust in others or confidence in themselves. They lacked the sense of security which might have enabled them to cope with frustration as a more mature person could do. Their impetuousness, their low tolerance of others, their proneness to be discontented, all were seen to stem from their lack of faith in

> themselves and their world. The easy and quick transition into violence was an indication of the degree of their hate for themselves and the world. Their self-hate, compounded by identifying as Negro, is sustained by the social attitudes they meet in the world outside their own narrow circle. Thus their basic insecurity and lack of confidence are reinforced because they live in a racially discriminatory world.

Another author says,

> All self-concepts are significant in understanding individuals. But those that are of greater concern to us as educators and citizens are the negative ones. The child with a negative view of self is a child who will not be able to profit adequately from school. Once a child is convinced he cannot learn in school, the task of educators becomes almost impossible. He may well make trouble for his classmates, his teachers, and himself. A negative self-concept is crippling, because it is often hidden from view of the naive or untrained observer. Most children who hate themselves act out this self-hatred by, literally, kicking the world around them. They are abusive, aggressive, hard to control, full of anger and hostility at a world which has told them that they are not valued, are not good, are not going to be given a chance. And such attitudes often continue to cripple an adult life.[2]

Then, what about the education of these angry, alienated children?

> Too often educational debates revolve around IQ and achievement scores, without full consideration of the higher cognitive processes. Controversy over the education of Negro children is no exception. Consequently, it seems worthwhile to briefly consider creativity, survey the principal research findings concerning this elusive property, and compare these findings with the typical situations most Negro children find themselves in today . . . To translate these individual traits (components of creativity) into social conditions, then, the creativity-stimulating social situation is one where curiosity, spontaneity, originality, and preference for complexities are encouraged, where acceptance of self as a distinct, worthwhile individual is firmly developed, and where submissiveness to authority is discouraged. The structure of such an optimal situation is obviously not an easy task. To be sure, relatively few of America's classrooms for either white or Negro pupils probably attain these characteristics. Yet there are a number of reasons for believing that the racially-unbalanced school situation presents unusually serious barriers to the establishment of these creativity-stimulating conditions.[3]

And what about curriculum?

> Certain critics of American education . . . argue persuasively that schools and colleges often seem to be engaged in a more or less unconscious conspiracy to prevent students from discovering the truth about the real world in which they actually live . . . Thus, to what extent do children in the South obtain unbiased knowledge of the Negro problem? To what extent do children anywhere in America obtain a picture of economic and political events not colored by the propaganda or vested interests of some official, or unofficial pressure group? To what extent, also, do they have opportunity to consider under critical and responsible educational direction the changing mores of our age—especially the values of sexual morality.[4]

Brameld continues,

> "What reconstructionists desire most is the kind of education that will engage directly in the rebuilding of culture on a world scale, for they hold that we are now deep in a period of history that can otherwise easily lead to complete disintegration." [5]

Goodman says,

> "There is only one curriculum, no matter what the method of education: What is basic and universal in human experience and practice, the underlying structure of culture." [6]

Some children were hesitant to talk about race. When asked how they felt about white people, some replied, "They're all right" or "They nice." If pressed, they would concede that in the "olden times" or the "slavery days," Negroes were mistreated, but they maintained that there was now complete equality. Other children responded immediately. "I don't like white people." Young children when asked to name white people that they knew, often mentioned light-skinned Negroes. A twelve-year old girl said that she felt "mad" because "White people's hair don't get nappy when they go swimming."

The children's pleasures seem to be few—TV and playing ball were the ones mentioned most frequently. Other children mentioned, "helping my mother," "dancing," "holidays when my mother takes us somewhere." Many children expressed an interest in going "somewhere," but could name few places that they wanted to go. Places named were the White House, the Capitol, or visits to relatives, or to Glen Echo Amusement Park.

I asked the children what, if anything, was wrong with their neighborhoods, country, the world and, if they had the power, what would they do to change things. Most children said their neighborhoods were "bad," "dirty," that "men fight and shoot guns," "cars run into houses."

One child said he would change things by "planting flowers." A twelve-year old boy, who said his neighborhood was "bad" and that he wanted "to live in a good neighborhood, and clean one, with respecting people," also said that "Everything's fine" when asked if there was anything wrong in this country. I asked him specifically if it was wrong that there were so many poor families. He said, "No, they're poor because their fathers won't work and support them."

Dr. Kenneth B. Clark said, in reference to a talk given by a Negro woman in a Negro church in Harlem, "most disturbing of the implications of her advice was that Negroes are responsible for their own condition, that dirt reflects defects in the inhabitants. She was buying the position of many middle-class whites that social victims are responsible for their plight. She was in error, but even more important was the fact that she was, in effect, presenting an apology for oppression." [7]

Our twelve-year old apologist wants to be a doctor, "cause a doctor does important things." He thought that he "would probably have to go to college for two or four months." He wants to be a "big man," a "good person." He likes math and reading. He gets worried occasionally when he wakes up late on Saturday morning and momentarily thinks that it is a school day.

Another boy who wanted to be a doctor thought that he needed to "study psychiatry and maybe join the Boy Scouts and learn first aid."

Most of the girls said they wanted to be nurses, but they knew little about becoming nurses and were aware of few other vocations. One girl, a twelve-year old, said she wanted to be a mother and get a job. When asked what kind of job, she said, "Well, if he says, 'mop the floor,' I ain't gonna do it. I'd be a teacher or a nurse or work in the government."

They want to grow up.

> "I'll be glad when I get thirteen so I can be big and be a teenager like the rest of the girls. I'm going to go out to dances and buy me some boss clothes and have a boy friend."

Some are aware of urban problems.

> "I'd fix broken buildings. I'd make projects. I'd help people get jobs."

And international problems.

> "I'd stop the killing in Vietnam. I would have peace with all the countries. I'd talk to their leaders."

Parents value education and hope against fear that their children will be successful in school. Many have resigned themselves to the likelihood that the children will fail. They try to help, but they don't know how.

A mother of eight said wistfully, as the teacher reported the failure of her youngest child, "I did hope that at least one of them would make it."

Other parents—

> "She's not smart at school, but she's smart around the house."
>
> "I had a sister went all the way through school, all the way through."
>
> "You give him some homework and I'll make him do it."
>
> "If he don't mind you, beat him."
>
> "I told him if he gets any more bad marks, he'll get a whipping."
>
> "Some families are just naturally dumb. I come from a smart family, but my husband's family is dumb and I guess the children take after him."
>
> "I don't mind buying the books as long as they don't tear them up."
>
> "I think he's doing pretty good. He's doing better than my older one."
>
> "She just loves school. She's here drawing and writing all day."
>
> "I'm teaching him his letters."

FOOTNOTES

[1] Perman, Dagmar Horner, *The Girard Street Project*, All Souls Church Unitarian, November, 1964.

[2] Patterson, Franklin, "Introduction: The Purpose and Trend of the Conference." Conference on the Relationship of the Self-Concept of Negro Youth to Education and Citizenship. September 16-19, 1963.

[3] Pettigrew, Thomas F. and Pajonas, Patricia J., *Social Psychological Considerations of Racially-Balanced Schools*. Presented March 31, 1964 at New York State Education Department Conference, Greystone Conference Center, NYC.

[4] Brameld, Theodore, *The Use of Explosive Ideas in Education, Culture, Class and Evolution*. Pittsburgh: University of Pittsburgh Press, 1965, p. 21.

[5] *Ibid*., p. 25.

[6] Goodman, Paul, *Growing Up Absurd*. New York: Vintage Books, 1960, p. 82.

[7] Clark, Kenneth B., *Dark Ghetto*. New York: Harper & Row, 1965, p. 56.

SOME CONSIDERATIONS IN DEALING WITH MIGRANT CHILDREN

Reasons for Educational Underachievement of Migrant Children

Thomas Perry, Jr.
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I. Reasons related to classroom teachers

A. Lack of teacher-student rapport

The teacher has had no training in understanding the migrant child. Teachers and counselors must learn carefully the subcultures and perhaps the language of the groups they counsel and teach. Even the English spoken at home by migrants and other low status groups is, in great part, a foreign language.

B. Lack of teachers' understanding of the migrant's self-image
Counselors and teachers must learn how the migrant sees himself, and how he lives. Among the migrants, conditions and traditions exist which make it difficult for the children to see the relation between effort and reward. The adult models for the migrant children are unlike the models of the affluent.

1. Weakness in drinking ability is humiliating. The true man drinks frequently and in quantity. Inability to maintain dignity while drinking is a sure sign of weakness, as is the refusal to drink.
2. The male regards the female as something that exists to be conquered. He is proud of his seductions, and does not hesitate to point them out to his companions.
3. The wife is expected to show absolute respect and obedience to the husband. The wife who irritates her husband may be beaten, and usually accepts this punishment as deserved.
4. A true man, therefore, is one who can drink well, can defend himself, has a number of sex relations, and a number of sons borne him by his wife.

II. Reasons related to the migrant's misconceptions of the world

A. The world governed by luck rather than by cause and effect
This was shown to me very vividly about two years ago when I decided to try to get out of the migrant stream and get a steady job. First I needed to get more education, so I started to go to one of the adult education classes set up in the state of Oregon by the Valley Migrant League, an organization funded by the Office of Economic Opportunity. After I got my high school diploma, I got a steady job. When my friends found out that I had a steady job, they would tell me how lucky I was, even though they knew that I had gone to these classes and gotten a high school diploma. In their eyes, I was still considered very lucky.

B. Life a series of difficult situations to be avoided if possible
In contrast, the middle-class parents teach their children that life is a series of hurdles which must be jumped.

C. Teaching a clean, easy job that pays well
The teacher thinks of it as a demanding, poorly paid job.

III. Reasons related to the limited experiences of the migrants

A. Living conditions
Many of the migrant children have been deprived of the things that the rest of society takes for granted. Some have never known any other home besides that of a one room cabin in some labor camp or the back of a truck. Five months in one place is a long time.

B. Reading materials
There are usually no books or magazines in the home. There is no one to read to them. There is no motivation for them to learn to read and write since father and mother do not read except for the most necessary things. Brothers and sisters do not read, older friends do not have time to read or have never learned to read.

C. Interpretation of traveling experiences
The migrant child does a great deal of traveling, and many people think that because of this they should know about many things. A child does not learn much about the places he sees from the back of a truck. Nobody tells him that the big building he just passed is the Alamo, or that the town they are going through is where President "so-and-so" was raised. The place where he spends the night is usually some rest camp about eight or nine miles out of town. The labor camp where he lives is usually in some out of the way place, and populated only by people of the same status and background.

D. Language development
The migrant child is said to be inarticulate; actually, he is only lacking in formal language development. When at home or in the fields, or playing with other children of the same environment, he is very articulate and has a richness of expression.

E. General "know-how"
The migrant child has a weakness in general "know-how," which carries through to the adult. Thus he does not know how to get a job, how to fill out forms, how to take tests, how to answer questions, how to listen.

IV. Characteristics of the migrant child that need to be explored

A. Cooperation and mutual aid that marks the extended family

B. Informality

C. Humor

D. Ability to express anger

E. Freedom from being word-bound

F. Freedom from parent overprotection

G. Enjoyment of each other's company

H. Individualism

SOME CONSIDERATIONS IN DEALING WITH NORTHERN URBAN NEGRO CHILDREN

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Harlem has its middle class. Our concern, I assume, is with that child whose existence is characterized by poverty, whose surrounding is a slum, and who lives where unemployment, dope addiction, and other evils of poverty and discrimination live and thrive. The Harlem population with which I am dealing is the Central Harlem population, composed mainly of Negroes, not the East Harlem population which contains a large percentage of Puerto Ricans.

Some, if not all of the characteristics with which I will deal, are characteristics of people everywhere. Some are more predominant and intense among poorer people, whether they are Negro or white. Some are found more frequently among Negroes. My topic has to do with expectations of children in Harlem.

The controversy over the meaning of Harold Pinter's play, *The Homecoming*, has been fascinating. Essays that attempt to unearth the play's meaning have been published in the New York Times. To me the most cogent point made by the play is that of the power of hostility. It is hostility, not love, that holds together the family in that drama, and it is hostility that has a unifying as well as its to-be-expected divisive effect upon the child in Harlem. In his world, hostility is ubiquitous. He learns to expect it and to deal with it.

If you question teachers in Harlem about their biggest problem, "discipline" will be a frequent response. Many of these discipline problems result from the attempts of the child to deal with hostility.

Much of the communication among the children is hostile and antagonistic. The epitome of this is to insult a member of a child's family. The most potent of insults involves his mother. At times it isn't even spelled out. "Your mother," spurted out is enough to indicate derogation. This practice of insulting a family member is called by various names—"playing house," "playing the dozens," "soundings." "Hey LeRoy, Your Mama is Calling You," is the title of a song that became popular a few months ago. It was played on many radio stations, but it had an inside meaning to Negroes; it was a part of playing the dozens. The recipient of the insult of course, becomes angry, and retaliates either verbally or physically. This becomes part of an undercurrent of which the teacher may or may not be cognizant.

Ridiculing either a child's physical appearance or his clothing, is not of course, unique to Harlem children. Its importance is that it is a part of a continuing pattern of hostility. In the same vein is the seizing of something desirable that belongs to someone else. This is illustrated by a snack-time incident. While a child was away from his desk sharing his pretzels with another child, a group of boys pounced upon the remaining pretzels and ate them. They found amusing his confusion about the disappearance. Possessions can have greater significance than they might to the middle class child. One aspect of the success of the use of E.S.I. Science materials has been that sometimes the children are able to keep some of the items. "We can keep these?" is their incredulous response.

In coping with hostility, some children learn to attack before they are attacked; others adopt a passive approach of withdrawing. The acceptance of being put down is epitomized by a currently popular record entitled, "Tramp." It begins with the woman calling her man, "tramp." While she is documenting her epithet with denigrating accusations about his clothes and his lack of money, the man is good-naturedly defending himself. The disc jockey on one Negro station humorously described the record as a "nitty-gritty soul conversation."

Though there is a prevalance of hostility, that is not the sole way of relating. Emotions run the gamut common to all human beings. Friendships are close, warm, and staunch. Children "stick up for each other" and look out for each other.

It has been pointed out that there are teachers who resent teaching lower class children. The resentment is increased when the child is a Negro. Some teachers are openly hostile to the child. He sometimes accepts this behavior, and at other times rebels. Negative attitudes towards the children are evinced by some Negro teachers as well as by some white teachers. Whereas the expectations of the children by some of the white teachers may be too low, those of the Negro teachers may be too high. The Negro teacher may feel the necessity to make them model children, or she may reject them with, "I've never seen children like this before," or "What can you do with them?" The latter sentiments are frequently shared by white teachers. The hitting of the children by teachers is not uncommon. It may be done surreptitiously or openly. The use of threats and punishment contribute to some of the rebellion teachers face in the junior and senior high schools when the child strikes back—sometimes physically.

Frequently the parent's response to his anger with the child is to strike or to whip him. When I stopped a film and asked what would happen to the little girl who, by making too much noise, had placed her family in the position of possibly having to move, one of the answers was, "She'll get a whipping." Some parents are angered to find that their child has been struck by a teacher, while others will tell the school to employ corporal punishment if necessary. This latter point is made by teachers when they explain the child's expectation of physical punishment at school.

He learns to expect and to accept responsibilities at home, but to expect few real responsibilities in school. At home he may tend younger children, iron and cook. He may be more vividly aware of the adult world of responsibilities and problems than the middle class child. The school, in contradistinction, sees him as a child with not enough structure and direction from home, and sets about to allot him piddling chores and to structure his learning. He is asked to take little responsibility for his learning. He develops an independence which the school seldom gives him an opportunity to use, either academically or socially.

The child expects to be rejected in school if and when he exposes himself and his ideas. The school has ideas that are acceptable to it, and acceptable ways of expressing those ideas. The child learns to expect that not only will he not be able to meet those standards of acceptability, but if he expresses himself and fails, he will be punished. By not exposing himself, he does not risk punishment. In contrast to the volubility with which he communicates with his peers, outside of school, he frequently expresses himself in school hesitantly, if at all. Those peers who outside of school unconsciously offer a supportive framework for expression and communication, withdraw it in the school setting.

The child expects to live in a Negro world whose criteria for status differ in many ways from those of the white world. This world is unknown to the white world. Basically the children live in two worlds: their world, and the world of the school. The significance of this dichotomy is that whereas the white child constantly sees his world portrayed in the mass media, the Negro child sees his there, mainly when the Negro is the criminal, or is involved in civil rights agitation. To see himself in his totality in media, he must turn to the Negro newspapers, magazines, radio stations, and theatres. The rejection by the larger society results in an increasingly defined subculture, which is increasingly ignored by the white society. This includes the school which feels it has dissected the Negro society when it has analyzed the implications of broken homes. The subtleties and nuances, critical to understanding, are not dealt with by the white society. Some of the subtleties have to do with the creativity of expression in speech, dance, and music; nuances come from the culture of the church, the Southern rural background, and the basic experience of what it means to be a Negro.

Extra-legal activities constantly surround the child. The numbers racket pervades Harlem beauty parlors, restaurants, bars, stores, and streets. "What's the number?" "What's leading?" "What's good?" These are common greetings. It is a *sub rosa* activity conducted openly, involving Negroes and whites. Its practitioners quickly spot an outsider who may be an enemy, but many white people are unaware of the presence of the numbers activity. A white consultant in a school in which I was working told me that she liked going into a particular little restaurant because there were crowds of happy people there. I went there alone and immediately knew that "the happy people" were waiting for an announcement of the number. I took three white colleagues to the restaurant for lunch and was aware of the scurrying and the covertness that took place. After watching us for awhile and deciding that we were innocuous, people resumed their former comfortableness. There are beauty parlors where the runner comes in early in the day to collect the money and later to report what the number is. The runners may be white, Negro, or an integrated pair. I have been told of a school where a numbers man comes and collects money from the teachers. A "hit" can mean the difference between having and not having, particularly in a community where wages are so low that a salary cannot be the means of acquiring material goods. The rich numbers banker, or the man who "hit big," is to be envied. In New York, the numbers is not confined to Harlem but flourishes in some white communities as well.

Men with "hot" goods, varying from the trinket to the expensive, peddle their items from shopping bags and boxes on the street. I bought a bunch of bananas from a fruit truck that was parked across from a school in which I had been working. When the owner went to the cab to make change, he returned with a box of clothing, obviously "hot goods," which he tried to sell to me. I often have the experience, while standing at a bus stop of having someone sidle up to me, quickly open a shopping bag, and wait for a minute to see if I am interested in its contents. These peddlers sometimes wander into small establishments where they try to sell their wares. The child comes to expect illegal activities as an integral and profitable part of his community. The school talks of a morality that runs counter to community realities.

SOME CONSIDERATIONS IN DEALING WITH APPALACHIAN CHILDREN

Excerpts from "A Cultural Approval to the 'Disadvantaged'"

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Since before the dawn of history man has acted on the common sense assumption that individuals from different cultural backgrounds act differently, have different value systems, are motivated by different things, and see the world in different terms. Modern cultural anthropologists corroborate this common sense assumption in every detail. In addition, the culture concept as used by the anthropologist gives us a neutral base for comparing and understanding human behavior in its many cultural variations. This neutral frame of reference is necessary since all individuals are themselves culture-bound and tend to act and think to a great extent congruent with the particular culture they possess. If the cultural approach to the disadvantaged of Appalachia has any validity, it must be shown that there is a significant difference between the culture of the advantaged and that of the disadvantaged.

The cultural background of most of the disadvantaged in Appalachia is a rural one. Even the majority of the disadvantaged found in the urban areas of West Virginia are only one and at most, two generations removed from the small, patch-farming, hill culture of the Appalachians. This hill culture is a distinctive cultural tradition which can be traced back to the English-speaking mixture of Celts from Ulster, the English frontier in Ireland, and the lowland Scots (really Scots-Irish), who, in the early days of settlement, filled up the hillsides, coves, and valleys of Appalachia beyond the English towns of the Piedmont with a few cows, a bag of corn in a New World recreation of the same Celtic dispersed-farm-cattle-and-kitchen-garden patch farming that to this day is distinctive of the Irish small farms and the Scots crofts.

The cultural ancestors of this hill culture came into the Appalachian mountains singly and by families. They cleared fields out of the forested hillsides and developed their neighborhoods and communities centered around the crossroads and forks. Their schools, churches, stores, and mills were scattered haphazardly in the open countryside in what is known as the dispersed-farm, open-country settlement pattern so characteristic of Appalachia while it was America's frontier. The community had no single center such as the town dwelling Englishmen had developed in New England, but was instead a haphazard criss-crossing network of roads up the valleys, across the ridges, and down into the hollows. Each family lived on its own hillside farm in a subsistence pattern in which almost everything needed was home-made.

The major social organization of the communities was the kin-based family and throughout the region relationships with neighbors and others were determined by the principle that "blood is thicker than water." This is the older and original type of community in Appalachia and the culture developed here still colors the culture of contemporary Appalachia even through industrial towns in the North and mining towns in the South were later introduced. Let us look briefly at the type of culture that developed in the isolated hill settlements, especially as it affects the behavior and way of life of so many families from which disadvantaged children come.

Their technology has been that of the subsistence farmer to whom hard physical work for both men and women was just part of life. Because of the spatial isolation, attitudes and beliefs of independence, self-reliance, and individualism are dominant. The very motto of the state reflects this feeling of freedom and independence. Even within the kinship network, there was this sometimes excessively self-centered individualism. Even today, this trait can be seen in the tendency to quit a job in a "huff" over some minor disagreement with supervisors or co-workers and in the inability to go along with the group in trying to solve some community problem. Refusal to compromise or cooperate if the group decision does not suit one, can be found today from quarrels with neighbors on up to the state legislature. This precedence of personal interests, whims, and feelings is one of the most striking characteristics of the area. Correlated with this trait is a sometimes extreme suspiciousness of strangers and outsiders who do not belong to the local group. So also is the characteristic of refusing to recognize expert opinion—since one man and his ideas are just as good as another man's.

Leadership in Appalachia is, ideally, in the hands of elders; the young are distrusted in positions of leadership. Leader-followership is very personal if it is to be effective and the ideal leader is one who has a great deal of charisma rather than one who is qualified in terms of knowledge and skills. Coupled with this trait is a leveling tendency in which no man rises very far above his fellows except at the risk of alienating himself from the group. This means that even the leader should ideally act as though he were just as common as any of his followers. This tends to discourage any kind of initiative in which others are intimately involved. The everyday language of the area is rich in expressions which are used, by means of gossip and ridicule, to lower the esteem and status of one who appears to be "getting too big for his breeches."

Existence is a day-to-day affair where the traditional and familiar is safer than the new and the strange. This is a characteristic found throughout the world among people who live at the subsistence level, the pattern in the mountains for over 200 years. This attitude leads to a fatalistic acceptance of what life brings and a rejection of object goals by individuals and families. It is sometimes said of the people of Appalachia that they do not make plans; this is not correct. They do make plans, sometimes quite grandiose and unrealistic plans; what they do not do is make schedules, and work toward carrying out the schedules.

The people of Appalachia operate best in small groups where interaction is personal and face-to-face, with people who are known. They are uncomfortable in formal interaction situations, especially where there are appreciable status differences among the persons interacting. They fear, distrust, and are antagonistic to authority in formal situations. Closely related to this trait is a distrust of the well-educated and an ambivalence toward education unless it is immediately practical. This trait seems to be related to their fear and distrust of any person who is in a position of power or authority unless he is one of them. Thus any person occupying a role carrying authority is seen as a threat, whether he be a policeman, sheriff, social worker, or teacher. The people themselves are not status seekers.

The family in Appalachia is an adult-centered family in which there is a sharp sex role separation. The male is dominant in the family structure, with the female role sometimes taking on some aspects of martyrdom. With few shared family activities, emotional ties are extremely important in holding the family together. Oddly enough, children, who are highly valued, are handled more permissively than would be expected considering the somewhat authoritarian structure of the family.

Children from the above cultural background tend to reflect their elders since it is from the family and neighborhood that they get their values. It is the only world they know. It is small wonder that many such children have difficulties when they enter the formal school situation which today in Appalachia is increasingly formal and bureaucratic, especially with the push toward consolidation that has been going on since World War II. Many of the cultural characteristics and traits of Appalachia are perceived as lower class traits in relation to the urbanized middle-class oriented society when the individual from Appalachia gets out of his home neighborhood. Children from this cultural background are likely to be misunderstood in the urban school situation by the middle-class-oriented teacher who, unaware of the culture concept, misinterprets cultural differences for class differences toward which she herself is usually ambivalent.

There is no quick and easy answer to the problem. Clearly the individual, psychologically oriented approach is not sufficient. To add training in sociology and anthropology for the teacher is adding more to an already overloaded curriculum. If it were possible to change teacher education, it would not affect those teachers who are already trained and have already developed their own self-image of what a good teacher is and does, based, of course, on the way they were trained. Their personality, world view, and self-image have already been developed and the addition of a course or two in the behavioral sciences will have little effect. Moreover, it is not realistic to expect a teacher to become a psychologist, a sociologist, and an anthropologist, as well as a good teacher.

2. Group Report—The American Indian Child

Although the group reports of each discussion which centered about a particular disadvantaged minority were assimilated into the general report here published, the group report of the discussion on the American Indian is included in its entirety. This report should not be construed as dissenting; rather, the group report graphically emphasizes the fact that the problems of this disadvantaged group lie in causes (and solutions in actions) so different from the other minority groups that such a discussion could scarely be digested into a general report.

American Indians are unique in American society in that—

1. Rather than selecting for themselves a process of immigration they were "moved in on" by an invading culture. Hence, many Indians do not conclude it to be natural that they should change, acculturate, or assimilate into such a "mainstream."

2. Their history represents the hunting-gathering ethos which is in sharp contrast to the agricultural ethos from which almost all other Americans come. The contrast is between the Indian's sense of living in harmony with a single, all-encompassing nature controlling man and the supernatural, and the white man's sense of controlling nature, other men, and even the supernatural.

3. The Indians feel themselves first to be members of particular tribes bound to a particular geography, language, and historical and cultural tradition. They are Hopi or Cherokee or Cheyenne—and some of them are also becoming "Indian"—all intensely loyal to an America which recognizes the legitimacy of historical subgroups.

In consequence, American Indians generally value their social and cultural tribal identities much more than other subgroups, and historically, have resisted any changes which threaten either this identity or the cultural values by which they live. The education of American Indians cannot even begin if it is interpreted as something which turns them into white men, or if it requires them to violate what they conceive of as proper Indian behavior. The only way to assure that education is not so interpreted is to bring the Indian community into control of its educational system; this also assures that the unique cultural characteristics of each tribe will be fully taken into account in its schools.

These distinctive characteristics must be recognized by decision-makers at all levels of education. The role of the federal and state agencies such as the Bureau of Indian Affairs, the United States Office of Education, and the Office of Economic Opportunity, needs clarification. We believe these roles are basically, to provide funds for local control, as well as for experimentation and development of relevant curricula. Provisions should be made for curriculum development which include methods, techniques, and devices for educational experiences at all levels which will consider the unique cultural forces dominant in the traditions of American Indians. Programming should allow for honoring the plurality of Indian traditions so that Indians may find self-affirmation within their own cultural concepts. This, in turn, will create a firm foundation for the addition of whatever kind of knowledge may be necessary to relate to a modern technological society.

Besides normal exposure to standard academic subject matter areas, curriculum for Indians must include a recognition of special need for activities which will encourage an extension of their own cultural expressions—their arts, and their concepts of social, religious, and political structures.

Some Questions and Issues

1. In view of the incredible misconceptions regarding American Indians, what special responsibilities do schools, teachers, scholars, and publishers of educational materials have to correct the omissions, distortions, and inaccuracies of Indian history and Indian culture prevalent in most elementary and secondary texts?

2. How can there be a transfer of responsibility and control for Indian schools from non-Indian agencies to Indians themselves?

3. In what directions can universities and colleges that have a responsibility for teacher education move to provide technical assistance for materials development and educational personnel?

4. What special attention on the part of scholarly and professional organizations is necessary in order to focus resources on the critical needs of Indian communities?

5. Do national, state, and professional curriculum projects have any relevance to the ethos and culture of Indian communities?

6. What provisions exist for the development of viable and meaningful alternatives for Indian youth?

7. Can a society committed as ours is to an industrial, technological and scientific ethic, allow for the complete, yet different self-determination of some of its citizens—notably the American Indian tribes—if these citizens should choose such a course?

APPENDIX TWO

CURRICULUM PROJECTS

This Appendix comprises short descriptions of those curriculum projects which were represented at the Conference. Personnel and activities described are as of the date of the Conference.

Adams-Morgan Community School Project

Washington, D. C.

Dr. Paul Lauter, Acting Director

Antioch College, Yellow Springs, Ohio, the District of Columbia Board of Education, and the Adams-Morgan community of Washington, D. C. have undertaken an experiment in urban teaching and teacher education in the Adams-Morgan area of Washington. In the experiment Antioch College and an elected community-school council have been given autonomy in the development of curriculum, the selection and organization of teachers, and the utilization of plant. The experiment began in May, 1967, and is planned for at least three years.

Both elementary schools in the Adams-Morgan community are almost entirely Negro and suffer from every deficiency typical of inner-city schools. The Antioch/Adams-Morgan program involves a number of experiments designed to overcome these deficiencies. Instead of self-contained classrooms, team-teaching in a complex of four rooms, each of which holds one or more activity centers, has been implemented. Instead of grades, the 750 children are organized into seven overlapping age groups of about 110 children each. Each group works with a differentiated team of approximately nine adults: a coordinating teacher, associate teachers, Antioch graduate students and undergraduates, community interns, and National Teacher Corps interns. This arrangement permits the project to have an adult/pupil ratio of 1—12 with no increase in personnel costs.

The project is moving toward a fully individualized program of instruction in which children, with the aid of teachers, will be able to program their own time according to their developing interests. The curriculum and materials of the schools reflect this goal. Emphasis is on several beliefs: that the student's natural interest in himself and the world around him is the key to learning; that children learn best through making discoveries and solving problems by becoming actively involved in the learning process; that the teacher's job is to work from the student's interest rather than to have the student conform to his prearranged structure.

This flexible model of instruction presumes flexible and knowledgeable teachers who understand subject matter as well as theory of learning that pre-supposes the interrelatedness of all knowledge. Not only are there the curriculum demands of the Madison Math Project and the Elementary School Science Project which are being used in the Adams-Morgan program, but the teachers must also be able to deal with problems related to developing social science and language arts curriculum, offer students the same flexibility and adventure, and involve them in their learning processes in similar ways.

In addition to these experiments in organization, curriculum and methods, the project involves two other major innovations. The school is a community enterprise; a community school committee has been elected which plays a major role in the developing of school policies and programs; fourteen members of the community, ranging in age from 18 to 45 and in education from a year in high school to two years in college, will be members of the instructional staff as community interns. The school building will be open from 8:00 a.m. to 10:00 p.m., including Saturdays; and an after-school adult and teenage program is now under way.

Biological Sciences Curriculum Study (BSCS)

P. O. Box 930
Boulder, Colorado 80302

W. V. Mayer, Director

The Biological Sciences Curriculum Study (BSCS) was organized by the American Institute of Biological Sciences in 1958 to seek the improvement of biology education in secondary schools. Since that time, BSCS has developed three parallel versions of a high school biology course, sets of materials for the academically unsuccessful as well as the superior student, a set of laboratory blocks dealing with specific topics in biology, and a programmed sequence of films. BSCS has also produced a number of materials for teachers including publications on the implementation of the BSCS program and biological education in general, a sequence of filmed laboratory situations, a newsletter, and a series of achievement tests based on the BSCS courses.

The primary objectives of BSCS are to provide biology teachers with materials which properly reflect biology as a twentieth century science and which present science as a way of thinking. Open-ended experiments and other materials are used as media for conveying an understanding of science, and student work is centered in the laboratory where real scientific problems are explored. Through emphasis on basic concepts and the illustration of such concepts in a laboratory setting, students are given practice in analyzing data, drawing their own conclusions, and seeking relationships from generalizations.

BSCS materials differ from conventional treatments of high school biology in several ways. The new curriculum is a result of a genuine cooperative effort among research biologists, high school biology teachers, and science education specialists. The materials represent not a revision of old thinking about high school biology but a completely new start based on the latest developments. Where traditional texts emphasized classical systematics, the organ and tissue level in biology, vocabulary and rote memorization, BSCS gives priority to molecular and cellular biology, community and world biology, and the study of populations with students gaining understanding through laboratory experiences which allow them to participate directly in scientific investigation.

The three parallel versions of the BSCS curriculum have significant unifying themes such as evolution, diversity, regulation, and the biological roots of behavior but they vary in their approaches to these topics. The Blue version focuses on molecular biology; the Yellow version emphasizes reproduction, development, and evolution; and the Green version considers the ecological and behavioral aspects of biology. There is no indication that one version is better suited than another to a particular group of students or a particular type of teacher. No differences have been found in the performances of students who have taken different versions on the same biology achievement tests.

Teachers do not necessarily need special training in order to use BSCS materials. Those teachers who have had recent experience in modern biology and understand the inductive approach to teaching can use the BSCS materials without additional work. For those teachers who need additional training, BSCS has prepared a variety of materials for inservice workshops and courses run by universities and school systems.

Support for BSCS projects comes from the National Science Foundation, the Rockefeller Foundation, and the Asia Foundation. Funding responsibility for BSCS is assumed by the University of Colorado.

General information about BSCS is available from the director, including a newsletter, special publications, experimental editions of laboratory blocks, and a number of films.

Conceptually Oriented Program in Elementary Science (COPES)

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New York, New York 10003
Morris H. Shamos, Director

The Conceptually Oriented Program in Elementary Science (COPES) is a curriculum development project funded by the United States Office of Education to develop a sequential elementary school science program centered on the major conceptual schemes in science. Each conceptual scheme is, in this approach, presented in a structured learning sequence with the purpose of helping students develop an understanding of the nature of matter at various levels of sophistication. A spiral system is being used in developing the curriculum in which, at each succeeding level of sophistication and at an increasingly rapid pace, the students will begin from the most basic skills and concepts and will follow the entire learning sequence as far as their maturity and learning capacity will allow them to go in the understanding of the major conceptual schemes.

Since 1965, COPES has been working on a two-year pilot study to prepare materials for a single conceptual idea that pervades all of science—the principle of energy conservation. As materials have been produced, they have been tested in classrooms and revised on the basis of feedback from teachers and observers.

Plans for the future include the development of units around other scientific concepts, preparation of inservice and preservice teacher training programs in elementary science, and publication and distribution of materials.

Contingencies Applicable to Special Education—Motivationally Oriented Designs for an Ecology of Learning (CASE-MODEL)

National Training School for Boys
Washington, D. C.
Harold L. Cohen, Director

The Contingencies Applicable To Special Education (CASE) Project is a motivationally oriented design for an educational program for juvenile offenders sentenced to the National Training School for Boys, Washington, D. C. All of the students in the program are school failures; 85 per cent are school dropouts and 15 per cent who were in school when sentenced range in levels of educational retardation of from three to six years. Ninety per cent of the students have histories of institutionalization in state mental hospitals and penal institutions.

The goals of the CASE Project are to improve the academic achievement of the students in the Project and to prepare as many of them as possible for return to the public school systems from which they dropped. The major task of CASE has been the creation of an environment in which learning behavior is produced and maintained in a population with negative previous learning experiences. This environment is created by giving each student a program for learning which is directly related to his needs and is sustained by a schedule of reinforcement. Each student is placed in a curriculum of programmed learning instruction designed to meet his individual needs as indicated by the results of a series of tests given him to determine his academic strengths and deficiencies. Academic achievement and improvement are reinforced in several ways—by points worth money for purchases within the school setting, such as soft drinks, and by recognition before the peer group by school staff members.

Because each student is placed in a curriculum in which he can perform successfully step by step on his own level, each student is programmed for academic success. The use of schedules of reinforcement in a motivationally oriented environment as in this project produce academically competent youth who see themselves becoming successful in an area where previously they had failed. This type of environment sustains learning for those who before now were classified as educational dropouts.

The CASE Project is conducted under the auspices of the Institute for Behavioral Research, Silver Spring, Maryland, and supported by a grant from the Office of Juvenile Delinquency and Youth Development, Department of Health, Education and Welfare. Detailed information about the program and similar projects may be obtained from the director of CASE.

Reference:

Cohen, Harold L., "Educational Therapy," *Architectural Association Journal*, March, 1967, London, England.

Curriculum Evaluation Projects

Brooks Foundation
Communication Research and Cultural Center
Santa Barbara, California
Don D. Bushnell, Vice-President and Director, Research and Development

The Brooks Foundation has developed a unique approach to the evaluation and revision of published curriculum materials and the development of new materials in which students are used as the critical reviewers of the text material. Using this method, instructional material is evaluated and revised through a process of repetitive cycles of tryouts, revision, and testing called iterative cycles, in which the student is the prime source of feedback. Empirical evidence is derived from learning situations using the materials in question rather than by the conventional procedures of curriculum workshops in which modifications are based on the teacher's subjective experience and are not in direct interaction with the individual student. By placing students on the feedback loop of the material evaluation and modification, the Brooks Foundation has demonstrated that more powerful instructional resources can be developed through face-to-face interaction between the teacher-curriculum writer and the student.

The Brooks Foundation currently has several major studies in progress. One study concerns the validation of educational systems packages for the occupational training of depressed area students for the Philadelphia, Pennsylvania, Board of Education. Another project is a survey of curriculum evaluation methodologies and strategies for the U.S. Office of Education. Recently completed by the Foundation is a feasibility study for establishing a methodology for selecting one or two commercial texts covering identical instructional units for the California State Board of Education.

References:

Bushnell, Don D., *The Validation of Educational Systems Packages for Occupational Training of Depressed Area Students.* Brooks Foundation, 1967.

Bushnell, Don D., *Final Report to the California State Board of Education on Testing Alternative Instructional Materials.* Brooks Foundation, 1966.

The Computer and Educational Progress in the School District of Philadelphia. Brooks Foundation, 1967.

Greater Cleveland Science Program

Educational Research Council of Greater Cleveland
Cleveland, Ohio
Ted F. Andrews, Director of Science

The Greater Cleveland Science of the Educational Research Council of Greater Cleveland Program is developing a sequenced, coordinated science program for grades K-12. Attention is also being given to research and development of preschool science materials and to science curriculum for use in the two-year college. The Educational Research Council is committed to the thesis that all educable youth should be able to comprehend the conceptual framework of science, to understand the logical processes which make useful the content of science, and to appreciate the relationship of the scientific endeavor to contemporary society and its impact on culture to the level of sophistication commensurate with their ability by the time they finish high school.

While the comprehensive K-12 science program is being developed, an interim program has been set up for the schools participating in the program. Grades K-6 are using the American Association for the Advancement of Science (AAAS) material, and grades 7-12 are using a variety of recently developed material in research science, biology, chemistry and physics. The staff of the Science Program is trying various ways of training teachers to use the materials in the interim science program and will attempt to evaluate the effectiveness of the program in achieving its objectives, with special reference to the relationship between the stated goals of the material and student achievement. Information gained from the studies of the interim science program will be used in establishing guidelines for the development of the Greater Cleveland Science Program.

Other information on the Science Program is available from the Educational Research Council of Greater Cleveland.

References:

Sequential Programs in Science for a Restructured Curriculum (7-12). Greater Cleveland Science Program, 1966, Educational Research Council Cleveland, Ohio.

Life Science: Instructional Guide and Student Investigations. Greater Cleveland Science Program, 1967, Educational Research Council, Cleveland, Ohio.

Science Problems, 11-12: Phases One, Two, and Three. Greater Cleveland Science Program, 1967, Educational Research Council, Cleveland, Ohio.

Greater Cleveland Social Science Program (GCSSP)

Educational Research Council (ERC) of Greater Cleveland
Cleveland, Ohio

Peter G. Kontos, Assistant Director

The Greater Cleveland Social Science Program (GCSSP), initiated in 1961 by the Educational Research Council (ERC) of Greater Cleveland, has developed a sequential social science program for grades K-12. The primary educational goal of the GCSSP curriculum is the learning of concepts and their interrelationships as opposed to mastering facts with no apparent relevance to each other. Learning takes place through an integrated approach involving the various social science disciplines. Cumulative learning is gained through sequential unity over the years so that the student finishes the program with an ordered body of knowledge in the social sciences.

The GCSSP curriculum was first tried in 1962, and since then the materials have been tested and retested many times with classroom experience in the 30 school systems using them. Eventually the materials will be published and distributed by a national publisher.

Classroom experience with the GCSSP material has shown that approximately 25 per cent of the students are unable to grasp fully the major concepts because they have inadequate reading skills and/or learning problems which result from economically and culturally disadvantaged backgrounds. To meet these problems and to develop curriculum suitable to the special needs of inner city children, the Educational Research Council has launched an Extended Program in the Social Sciences which will build directly on the successful experiences of GCSSP and will extend ERC's curriculum reform capacity into urban education, taking into account the social, economic, and psychological factors which tend to inhibit the learning processes of disadvantaged students.

The Extended Program will develop curriculum materials which will offer the teacher a variety of approaches to any given subject and provide a larger range of meaningful learning episodes from which the teacher can select those most suitable to the individual learning problems of his students. Various materials will be prepared including filmloops, tapes, records, film strips and personalized textual materials relying heavily on the use of photography and cartoons. While the curriculum will be designed to be more relevant to inner-city students, it will maintain the carefully planned conceptual base of a sequential social science program and will not be a watered-down version of the regular GCSSP curriculum. Information about the Extended Program and other ERC projects is available without charge.

Reference:

Kontos, Peter G. and Murphy, Jerry. *Teaching Urban Youth*. New York: John Wiley & Sons, 1964.

Harvard Project Physics

Harvard University
Cambridge, Massachusetts

Dr. Gerald Holton, Dr. F. James Rutherford, Dr. Fletcher G. Watson, Co-directors

Harvard Project Physics is a curriculum development program in high school physics supported by the Alfred P. Sloan Foundation, the Carnegie Corporation, the National Science Foundation, and the United States Office of Education. In progress since 1964, Harvard Project Physics grew out of the need for a physics course for high school students who did not have strong interests or aptitudes in science. The number of high school students enrolled in physics had been declining steadily because very few schools offered courses suitable to the abilities of non-science students and the founders of Harvard Project Physics believed that a physics course which treated fundamental physical ideas in a humanistic context rather than in preprofessional terms would better meet the needs of these students.

Harvard Project Physics has set up several guidelines which are central to the development of all its curriculum materials. A primary consideration is the refinement of the role of the teacher both in curriculum design and in his involvement with his students. The curriculum materials also stress the need for greater diversity and flexibility in the classroom.

A pilot version of the Harvard Project Physics course has been developed and is in its second year of testing in high schools throughout the United States. The course has been broken into six sections: concepts of motion; motion in the heavens; energy; waves and fields; models of the atom; the nucleus. A conscientious attempt has been made to rely on textbooks as little as possible and to use a variety of media to present the materials, including programmed instruction, transparencies, films, and laboratory exercises. Efforts have also been made to keep the materials and equipment required for the course simple so that the teacher will be able to work easily within the limitations of the average classroom. The materials will be available for general use by 1968 or early 1969.

A major concern of Harvard Project Physics from its inception has been the training of teachers who understand the aims of the new physics curriculum and are able to implement them. Two teacher education conferences were held in the spring of 1965, attended by 150 physicists and science educators, to make plans for preparing teachers to use Harvard Project Physics materials. The conference participants concluded that because teaching Project Physics requires both a knowledge of physics and the ability to use the variety of instructional materials developed by the Project, teacher education must be a joint effort of physicists and science educators. They also agreed that experienced Project Physics teachers would be an important resource in the teacher education effort.

Since 1965, several approaches to training teachers to use Harvard Project Physics materials have been tried. The National Science Foundation is supporting a number of in-service institutes during the 1967-68 academic year to familiarize teachers with the Harvard Project Physics curriculum. The Cooperative College-School Science Program which brings together colleges and the high schools in their vicinity is using experienced Project Physics teachers as key instructional personnel to provide substantial assistance to the teachers working with the curriculum for the first time through a follow-up during the academic year after the summer training. Films and videotapes for use on television and in institutes and area centers are being produced. In addition, these materials along with tapes, slides, and film-loops are being put together in packages for teacher education extension courses.

Reference:

The Physics Teacher, May 1967, is entirely devoted to the accomplishments and future plans of Harvard Project Physics.

Minnesota Mathematics and Science Teaching Project (Minnemast)

Minneapolis, Minneapolis
James H. Werntz, Jr., Project Director

The Minnesota Mathematics and Science Teaching Project (Minnemast) is developing coordinated mathematics and science curriculum for grades K-6, and organizing materials focusing on this curriculum for in-service teacher education programs. Begun in 1961 under the auspices of the University of Minnesota and supported by the National Science Foundation and the U.S. Office of Education, Minnemast has produced independent mathematics for K-4 and science units for K-3, and materials integrating mathematics and science for kindergarten and first grade. Integrated mathematics-science curriculum materials are in the process of being developed for grades 2-6.

Minnemast curriculum materials are used on an experimental basis in approximately 200 classrooms under the supervision of ten cooperating colleges. Revision of materials is based on written reports by the teachers regarding the clarity of the background material, ease of using lessons, reactions of their students, and the results of a variety of tests which measure changes in subject matter, performances, and the attitudes toward mathematics and science of the students. In-service teacher training materials are being tested and revised in conjunction with the experimental use of the curriculum in these classrooms.

NDEA Institute for Elementary School Teachers of Disadvantaged Migrant Children

University of Miami
Coral Gables, Florida
Arnold B. Cheyney, Director

The NDEA Institute for Elementary School Teachers of Disadvantaged Migrant Children at the University of Miami undertook to acquaint a group of 38 teachers and school administrators with teaching approaches which held promise for motivating disadvantaged migrant children to learn. The Institute had six objectives: to provide teachers with background on the physical, psychological, and sociological characteristics of the migrant child; to develop a knowledge of the value systems of migrant children and the conflicts between their conditions and the goals of American society; to instruct the participants in those practices which would be most effective in teaching migrant children; to develop in the teachers skill in the use and development of multi-sensory teaching materials; to involve participants in welfare service activities relating to the migrant child; to provide supervision and consulting services to teachers of migrant elementary school children.

The Institute met twice a week from October, 1966 to March, 1967, the period when the largest number of migrants are in the Miami area. Meetings comprised lectures by permanent faculty and visiting consultants, panels, discussions, a classroom project, and occasional field trips. Many of the sessions focused on a language arts theme which the director of the Institute believed was the point at which instruction of migrant children should begin. The Institute was funded under the National Defense Education Act by the United States Office of Education.

Project English Curriculum Study Center

Hunter College
New York, New York 10021
Dr. Marjorie B. Smiley, Director

The Project English Curriculum Study Center at Hunter College is one of 25 curriculum study and demonstration centers in English established by the United States Office of Education to develop and test innovative materials for the teaching of reading, composition, and related language skills. In operation since 1962, the Hunter College center has concentrated on designing reading materials to meet the special needs of junior high school students from culturally deprived urban environments and on developing teaching methods and guides for the preservice and in-service training of English teachers in inner-city schools. The language patterns of disadvantaged, urban children have been the major consideration in the selection of curriculum materials. Accompanying the materials are teaching guides that focus on the middle-class values and experiences of the teachers which often make it difficult for them to understand the learning difficulties of inner-city children. Special efforts have been made to incorporate audiovisual aids to train teachers in adapting audiovisual materials to the teaching of reading.

Project English materials are being used experimentally in New York City schools. Teachers receive in-service training in the use of the materials by means of videotaped English classes from special service schools and special materials on dealing with slow and reluctant readers.

References:

Smiley, Marjorie B., "Research and Its Implications," in *Improving English Skills of Culturally Different Youth in Large Cities*, United States Office of Education, Bulletin No. 5, 1964.

Smiley, Marjorie B., "Gateway English: A Project English Curriculum Study Center at Hunter College," in *Journal English Yearbook*, Fall, 1964.

Smiley, Marjorie B., "Gateway English: Teaching English to Educationally Disadvantaged Students." *English Journal* 54: 4; April 1965.

San Antonio Language Research Project for Disadvantaged Spanish-speaking Children

Department of Curriculum and Instruction
The University of Texas
Austin, Texas

Dr. Thomas D. Horn, Director;
Miss Clyde Martin, Curriculum Consultant

The San Antonio Language Research Project for Disadvantaged Spanish-speaking Children is a study focused on raising the academic achievement of Spanish-speaking children from impoverished backgrounds through innovative materials, methods, and teacher education programs. The study began in 1964 and involved several experimental approaches to learning that were tried with 900 first grade students for a year. Basically the approaches combined intensive instruction in oral-aural English and Spanish with instructional materials of the American Association for the Advancement of Science (AAAS) elementary science program using a nonverbal approach.

Since 1964 the study has been expanded to the point where 2450 first, second, and third grade students in San Antonio are now participating, and a number of different approaches are being tried, most of which relate directly to the development of language skills. The approaches include providing experimental background rich in conceptual understandings; establishing command of basic linguistic forms and increasing proficiency in the use of oral English; passing into reading and writing the language after sufficient oral base has been established; using the content of major fields of knowledge as the vehicle for concept development along with facility and skill in the language arts, *e.g.*, continuing the AAAS *Science: A Process Approach;* adding a social science program designed specifically for the study; mastering the content and language through the discipline of English as a second language; providing continuous and intensive teacher education through in-service programs; and developing appropriate assessment instruments for measuring ability and achievement of children with a Spanish-speaking background.

The social science program developed for the study by Miss Clyde Martin is of particular interest. Topics for second and third grade students have been designed using an intercultural conceptual model, based primarily on an anthropological idea, but related closely to the other social sciences and the humanities. Each topic is composed of three elements: content problems, such as the family; teaching processes; and language for concept development or simply the language a child would need to do the thinking required by the problem.

Sausalito Teacher Education Project (STEP)

Bayside School Campus
Sausalito, California

James E. Bixler, Director

The Sausalito Teacher Education Project (STEP) focuses on the preparation of teachers to work with educationally disadvantaged students with the ultimate goal of changing teacher education curriculum to be more responsive to the needs of teachers working with these kinds of students. In a cooperative venture, San Francisco State College and the Sausalito School District have established an off-campus teacher education center in a community of occupational, political, social and ethnic diversity. Funding from STEP comes from the State of California. The program was initiated in 1966.

STEP involves four major areas of activity: instruction and curriculum; counseling; evaluation and research; communications and community relations. The curriculum and instruction program includes an inter-disciplinary seminar in sociology, psychology and education, work with students in one-to-one and group situations, group professional conferences, and group counseling sessions in interpersonal relations. The program runs over a three semester period; all instruction takes place at the STEP center and in the schools.

The evaluation and research program is comparing STEP volunteers and regular elementary teacher candidates on a variety of points to determine the best way to select candidates for the STEP program and to predict the success of STEP volunteers in teaching disadvantaged children. Instructional faculty are also being helped by the evaluation to clarify their own teaching objectives within the program.

In the area of community relations, STEP is conducting studies involving community reaction to integration and the schools and working with parents in small groups to discuss, evaluate, and plan school policy.

Science Curriculum Improvement Study (SCIS)

Department of Physics
University of California
Berkeley, California

Dr. Robert Karplus, Director;
Dr. Herbert D. Thier, Assistant Director

The Science Curriculum Improvement Study (SCIS), initiated in

1963 and supported by the National Science Foundation, is a project focusing on the development of a new program in science for elementary schools. SCIS uses a material-centered approach in which the elementary classroom becomes a laboratory where children, individually and in small groups, gain firsthand experience with biological and physical phenomena. Children manipulate objects and organisms, observe natural phenomena and record data. The scientific concepts learned by the children grow directly out of their experiences with the materials. In this context the teacher's role changes from that of a lecturer who imparts knowledge to an individual who attempts to analyze and synthesize experience with his students and to develop generalizations and understandings.

SCIS differs from other science curriculum projects in several respects. The materials developed together form a complete and integrated curriculum rather than a series of self-contained teaching units. In the materials SCIS stresses concepts and phenomena with the learning process an implicit by-product of the children's experimentation, discussion and analysis.

To prepare teachers to use the SCIS curriculum, an in-service teacher education program has been developed, consisting of an in-service course taken by the teachers the year before they begin using the SCIS materials, an orientation conference held before the new materials are introduced into the classroom, an in-service consultation program, and an evaluation conference after the teachers have had classroom experience with one or more units of the SCIS program. A wide range of teacher education materials is being developed and tested at SCIS trial centers for use in teacher education programs, including source books of original papers on the theoretical, historical, and psychological foundations of the program, documentary films, videotapes, recordings, and various other audiovisual materials. After these materials have been tried, evaluated and revised, it is hoped that a tested teacher education program with a variety of suggested procedures and effective materials will be available for use by teacher education institutions and school systems.

References:

Karplus, Robert, and Thier, Herbert D. *A New Look at Elementary School Science.* New York: Rand McNally, 1967.

__________ "Toward Scientific Literacy." Reprinted from *Education Age* 2: 3; January-February 1966.

Lawson, Chester A. "The Life Science Program of the Science Curriculum Improvement Study." Reprinted from *The American Biology Teacher* 29: 3; March 1967.

Science for Children in Disadvantaged Urban Areas

NDEA Institute
Hunter College
New York, New York

Dr. Harold E. Tannenbaum, Director

Hunter College is cooperating with several major educational agencies in New York City in an intermediate science program designed to help teachers and supervisors of a single, inner-city school district become more effective in working with children from a markedly disadvantaged area of the city. The program centers around a series of in-service training institutes in the concepts and processes of science, in techniques for teaching these concepts and processes to disadvantaged children, and in those aspects of behavioral sciences particularly appropriate for work with intermediate grade children from underprivileged areas.

An institute for elementary school supervisors began the program in the spring of 1967, followed by a summer institute for intermediate grade teachers. Followup to the institutes is continuing throughout the 1967-68 academic year. Intermediate grade classes are receiving supplies of science materials designed to allow for individualized, process-centered activity programs for students. In addition, intermediate grade teachers and supervisors are participating in several post-institute training sessions to discuss their classroom experiences and deal with any problems they may be having. The program is supported with grants from the U.S. Office of Education under the National Defense Education Act and the Cooperative Research Act.

Senesh Program in Economic Education at the Elementary Level

University of Indiana
Lafayette, Indiana

c/o W. W. Stevens, Jr., Visiting Professor, Economic Education

The purpose of the Senesh Program in Economic Education is to introduce elementary school children to the fundamental principles underlying the functioning of society and to relate these ideas to the experiences of children in a meaningful way. The program is presented in a series of publications titled *Our Working World,* in which a concept called the organic curriculum is developed, based on the hypothesis that the fundamental ideas of the social sciences should be taught in every grade with increasing depth and complexity as the child's experiences become more complex. After encountering the same fundamental ideas in every grade, by the time the child has reached high school, he should be able to think analytically and to use his analytical tools to explore the various social problems and determine different approaches to resolving them.

Because economics plays such a major role in the child's life, it has been made the core of the *Our Living World* series. Related aspects of political science, sociology, anthropology, geography, and history are an integral part of the program. The program begins with *Families at Work* in the first grade and progresses through neighbors, cities and states and regions at work, the evolution of the social, political and cultural system of the United States in the fifth grade, and a comparative study of regions of the world in the sixth grade.

The material for each level is in three parts. The first part is a children's textbook, accompanied by a resource unit for the teacher which explains the purpose of each lesson, provides the teacher with various techniques by which the material can be presented, and shows him how the ideas of the curriculum can be related to the child's experience. An activity book is designed to enable children to apply their learning in various situations, making practical use of what they have learned.

References:

Morrissett, Irving, *Concepts and Structure in the New Social Science Curricula,* published by the Social Science Education Consortium, 427 Wood St., West Lafayette, Ind., 1966.

Morrissett, Irving and Stevens, W. W., *Social Sciences in the Schools: A Search for Rationale.* (Forthcoming.)

Special Curriculum Project: Pilot Program on Mathematics Learning of Culturally Disadvantaged Children

School Mathematics Study Group (SMSG)
School of Education, Stanford University
Stanford, California

William G. Chinn,
Mervyn E. Dunkley,
Project Coordinators;
Gloria F. Leiderman, Research Associate

The Special Curriculum Project was the result of a conference on mathematics education for underachieving students in April, 1966, coordinated by the School Mathematics Study Group (SMSG). SMSG recognized that a large number of students falling into the under achiever category were from economically and culturally impoverished backgrounds and decided that the greatest possibility for helping these students improve lay in working with them in their early school years.

The Special Curriculum Project was designed to study the readiness of preschool disadvantaged students for learning mathematical concepts and to develop a program for these students which would provide them with perceptual experiences and emphasize the application of labeling and categorizing in these experiences, thereby enhancing their concept learning ability. These experiences were designed to supplement the SMSG kindergarten materials which the teachers were using.

The Special Curriculum Project placed emphasis on perceptual experiences because findings of educators indicate that the learning of abstract concepts such as those in mathematics relies on the development of symbolic thought processes. Two such processes: the development of language, and the development of the ability to form mental representations of concrete objects which can be manipulated in thought, are crucial to a child's ability to deal with mathematical concepts. Perceptual experiences supplementing the regular SMSG program were seen as a way to help disadvantaged children more quickly develop their ability to learn concepts. These experiences include a variety of manipulative objects, toys, and children's books related to teaching mathematical ideas.

The results of a series of tests administered to disadvantaged students and middle-class students at the beginning of the Special Curriculum Program, halfway through, and at the end, indicated that disadvantaged children do start kindergarten with less readiness for learning mathematics than middle-class children and that a program of perceptual experiences supplementing the regular SMSG curriculum can greatly enhance the conceptual learning of these students. The disadvantaged group scored considerably below the middle-class group at the beginning of the year, but by the end of the year their test performances equalled those of the middle-class group. The Special Curriculum Program was supported by the National Science Foundation.

Special Elementary Education for the Disadvantaged Project (SEED)

Berkeley Unified School District
1414 Walnut Street
Berkeley, California 94709
William F. Johntz, Director

The Special Elementary Education for the Disadvantaged Project (SEED) aims at creating in disadvantaged students an excitement and enthusiasm for abstract mathematics through a discovery approach to learning. SEED is based on the premise that disadvantaged students can become more motivated toward school achievement if they succeed in a subject of high prestige such as mathematics.

Three assumptions running counter to traditional thinking underlie SEED. First, early childhood, particularly the ages six to ten, is the time people can most readily learn abstract mathematics. Secondly, the social surroundings that may hinder the development of verbal skills in disadvantaged children, are not handicaps in mathematics. Finally, remedial instruction is more damaging to disadvantaged children than helpful because it serves to reinforce their negative feelings about themselves while success in a prestige subject such as mathematics gives them pride in their abilities.

SEED places emphasis on imparting clear intuitions about mathematical structures and leading students to gain familiarity with the use of mathematical symbolism as a means of describing these structures. The SEED curriculum consists of a list of mathematical topics which can be covered in some detail in grades K-9 and which constitute excellent preparation for high school and college mathematics. No particular order is prescribed for the topics. Instead, choice of subject matter is dictated by student excitement and involvement and by the teacher's mathematical taste. All material is taught by an inductive method: the teacher asking probing questions which lead the students to discover concepts for themselves.

SEED operates in several elementary schools located in disadvantaged areas of Berkeley, California, with teachers coming from the graduate program in mathematics at the University of California, Berkeley. The program has also been adapted by several other school systems in California as well as the Learning Institute of North Carolina. A formal evaluation of the program is presently underway, supported by a grant from the U.S. Office of Education.

University of Illinois Committee on School Mathematics (UICSM)

Urbana, Illinois
Max Beberman, Director

The University of Illinois Committee on School Mathematics (UICSM) was formed in 1951 to improve mathematics courses for freshmen at the University of Illinois. Since then, the interest of the committee has broadened and projects have been undertaken in high school and junior high school mathematics curriculum development. All of the Committee's work in curriculum development emphasizes the discovery approach to learning in which students discover mathematical principles for themselves by testing and refining rather than being told about mathematics by a teacher. The work of UICSM is supported by the National Science Foundation.

During the past three years, UICSM has been developing materials in seventh and eighth grade mathematics for students who are poorly motivated to achieve in school and have weak reading skills. Much of the material is devoted to the arithmetic of rational numbers—particularly fractions. The material is based on the assumption that most junior high school students do poorly in reviewing fractions because they have behind them a history of repeated failures with fractions. The UICSM curriculum deals with fractions from an entirely new point of view in which the word fraction is not mentioned, a new system of notation is used, and fractions are interpreted in much the same way they are used in ordinary life and speech.

UICSM is setting up a special project involving the use of its junior high school materials with disadvantaged students. A major component of this project is a program for retraining teachers with focus on the special needs of disadvantaged students. The primary objective of the training program will be to enable teachers to conduct their classes in accordance with sound educational principles including consideration for individual differences in interests, student self-respect and the love of learning for learning's sake. While these principles are universally applicable, they are critical in teaching disadvantaged students. The content of the training program will center around the development of preplanned activities for use in the classroom. Through planning these activities, the teachers will come to understand the mathematics in the course and the educational principles which UICSM considers basic.

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APPENDIX THREE
CONFERENCE PARTICIPANTS

(Professional positions as of June, 1967)

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